

ECONOMIC INDICATORS REPORT

Prepared by:

**David Perkis
Purdue Center for Economic Education
Krannert School of Management**

and

The Charles Shor Foundation

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Summary

The purpose of this report is to provide a picture of the economic and social wellbeing of the United States in comparison to five other industrialized nations: China, Japan, Germany, South Korea, and Singapore. Drawing from secondary data sources, we compare micro, macro, industrial, and socio-economic data to gauge the health of the productive capabilities and the citizens within each country. Special attention is given to the manufacturing sector due to its perceived ability to offer high paying jobs and to create additional jobs in communities.

Methodology

For most indicators, data was collected for as many years as possible from a single global data source (OECD, IMF, World Bank, etc.). While local data sources typically cover more time periods, they lack the methodological consistency that makes comparisons between countries possible.

Results

Although the United States is still the world leader in total output, it has some dubious distinctions in comparison to the other countries of this study. The United States can claim:

- The largest share of consumption in GDP (Gross Domestic Product)
- The least amount of trade as a share of GDP
- The largest trade deficits
- The highest level of adult wealth
- The most significant wealth inequality
- The highest level of health care spending (without the best outcomes).
- The largest level of military spending
- The lowest GDP share of manufacturing

This report will clarify how we obtained these results, limiting opinions as to the desirability of each result for another time.

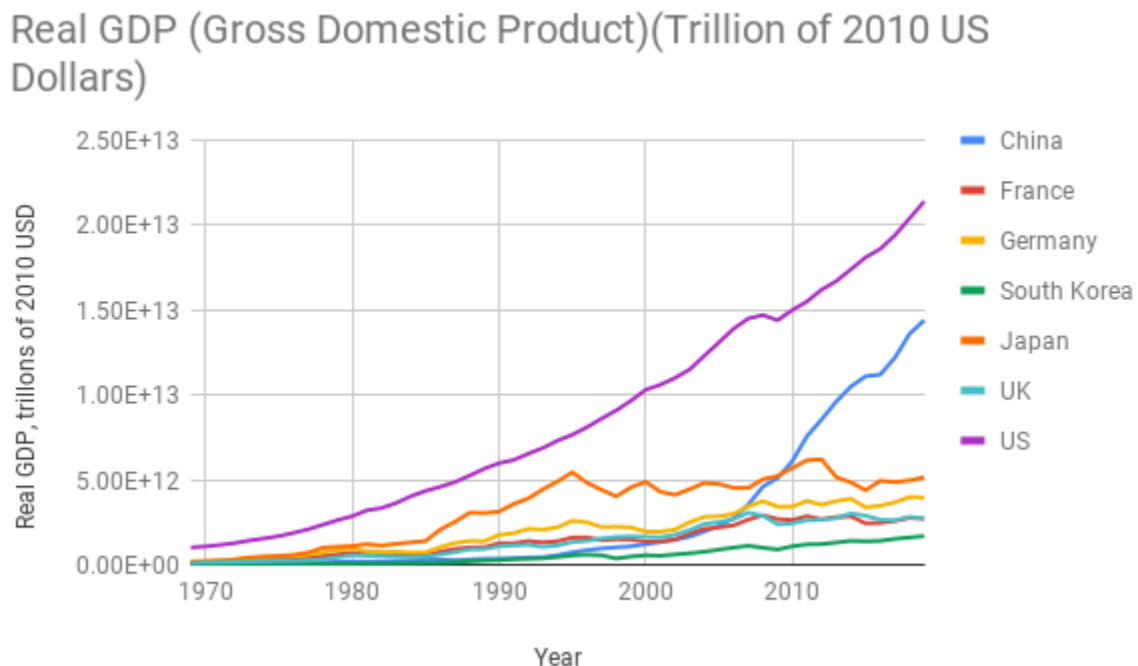
Chapter 1: National Accounts

Highlights

- On an exchange rate basis, the US produces the largest output in the world.
- Singapore has passed the US in per capita output.
- The US has the largest consumption share of GDP.
- The US has the smallest trade level of the six nations.
- Yearly US trade deficits in manufactured goods since 1976 total \$16.3 trillion.

Output and Growth

Figure 1



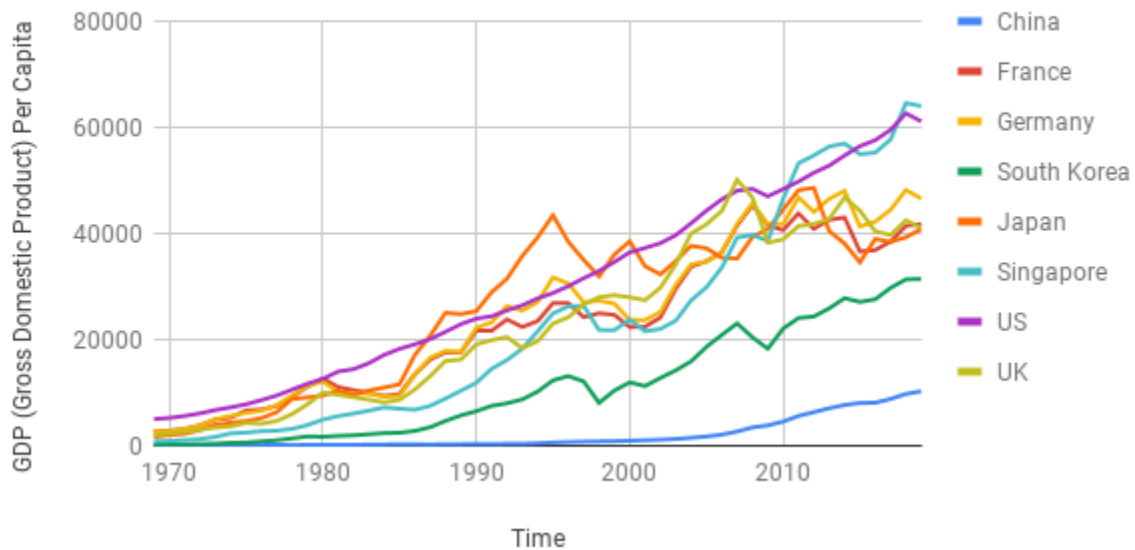
Source: World Development Indicators, World Bank

The United States is still the world leader in output as measured by Gross Domestic Product (Figure 1). In 2019, GDP measured \$21.4 trillion USD, compared to \$14.4 trillion from its next closest rival, China. In fact, when comparing based on purchasing power (Chapter 3), China has passed the United

States in GDP. If trends continue in their current form, one would expect China to pass the United States in all measures of GDP in the not too distant future.

Figure 2

GDP (Gross Domestic Product) Per Capita (Thousands of 2010 US Dollars)



Source: World Development Indicators, World Bank

On a per person basis (Figure 2), while the United States is still a world leader in productive output, other nations have caught up and passed the US in per capita GDP. For example, from 1990 to 1997 Japan exceeded the United States, and Singapore has largely passed the United States over the past several years. Outside of this study, several other countries exceed the United States in per capita GDP. These are typically oil producing countries or small nations with sound banking systems.

Consumption and Investment

As a share of GDP, the United States has the largest value of output going towards consumption (83.11%) and the second smallest amount going towards investment (46.49%), with Singapore having the smallest (Table 1). In

comparison, China has the largest investment level (46.8%) and Germany has the smallest investment level (19.78%).

Table 1: Shares of Consumption and Investment, % GDP

Nation	Consumption Share	Investment Share
United States	83.11	19.68
China	52.67	43.6
Japan	75.46	23.56
Germany	72.64	19.78
South Korea	63.64	31.07
Singapore	46.49	27.64

Source: Penn World Tables

Trade Levels and Balances

Total trade levels (Exports + Imports) vary widely amongst the nations (Table 2), with the United States having the lowest level of trade (28%) and Singapore having the highest level of trade (326%). Singapore can have a trade level greater than 100% due to intermediate financial transactions that register as imports or exports, but never register as a final produced good.

Table 2: Shares of Consumption and Investment, % GDP

Nation	Trade Levels (Exports+Imports)	Net Exports (Exports-Imports)
United States	28	-2.9
China	40	3.5
Japan	36	-0.3
Germany	86	7.6
South Korea	85	7.0
Singapore	326	26.9

Source: World Development Indicators, World Bank

Table 2 also demonstrates that Singapore has the largest trade balance (26.9%) while the United States has the largest trade deficit (-2.9%). This is indicative of

United States trade balances over the years, which have registered deficits every year from 1976 to 2017 (Figure 3). The total sum of these deficits amounts to \$12.8 trillion (2010 USD), with the bulk of it being accumulated since 1985 (\$12.1 trillion).

Figure 3

United States Balance of Trade, 2010 Real Dollars (>0: Trade Surplus, <0: Trade deficit)



Sources: Census Bureau (Balance of Payments) and Bureau of Labor Statistics (Producer Price Index).

Large United States trade deficits can be attributed to deficits in manufactured products. From 1992 – 2019, deficits in manufactured goods have totaled \$16.3 trillion (2010 USD), with the bulk of the deficit occurring since 1992 (\$15.5 trillion). Since 1992, our largest deficits in manufactured goods have been with China (\$4.6 trillion) and Japan (\$2.5 trillion).

Chapter 2: Financial Indicators

Highlights

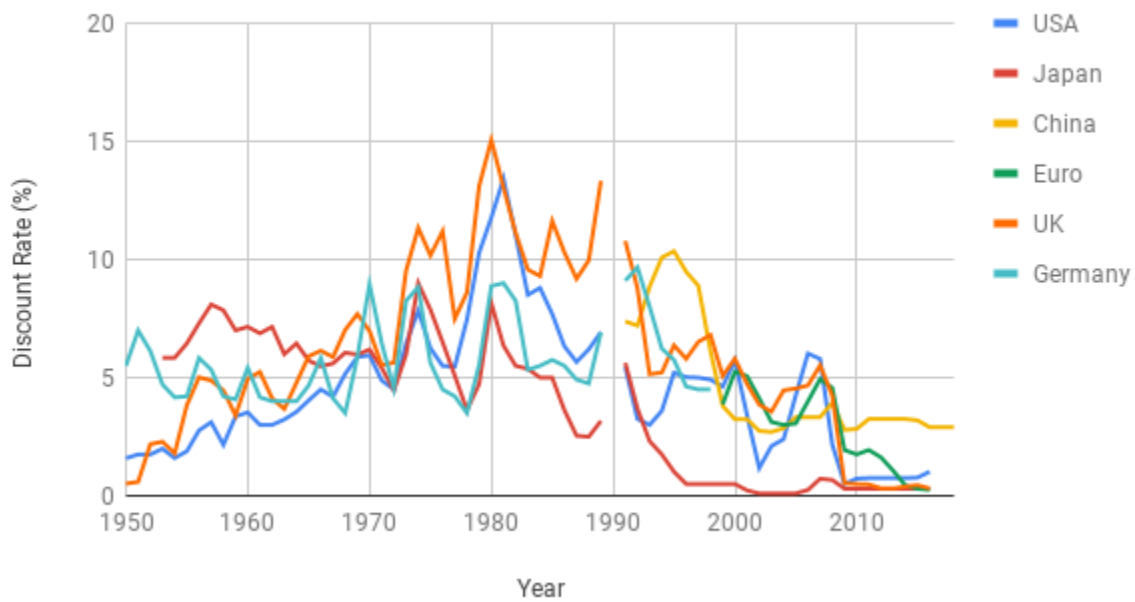
- All central banks have practiced monetary easing in some form since 2008.
- China has seen the largest increase in their balance sheet since 2000.
- Japan has consistently had the lowest discount rate.
- Since WWII, the currencies of Japan, Germany, and Singapore have strengthened against the US dollar.

Central Bank Policy

Monetary policy has been extremely accommodating around the world as of late, with central banks lowering their lending rates and practicing quantitative easing frequently since the financial crisis extending into the COVID-19 pandemic. This is in stark contrast to the 1970's and 1980's when the Federal Reserve and other central banks increased interest rates severely, often to fight inflation (Figure 4). The Monetary Authority of Singapore, established in 1971, does not use discount rates to conduct monetary policy. They rather influence policy through foreign exchange mechanisms that affect exchange rates with their most significant trading partners.

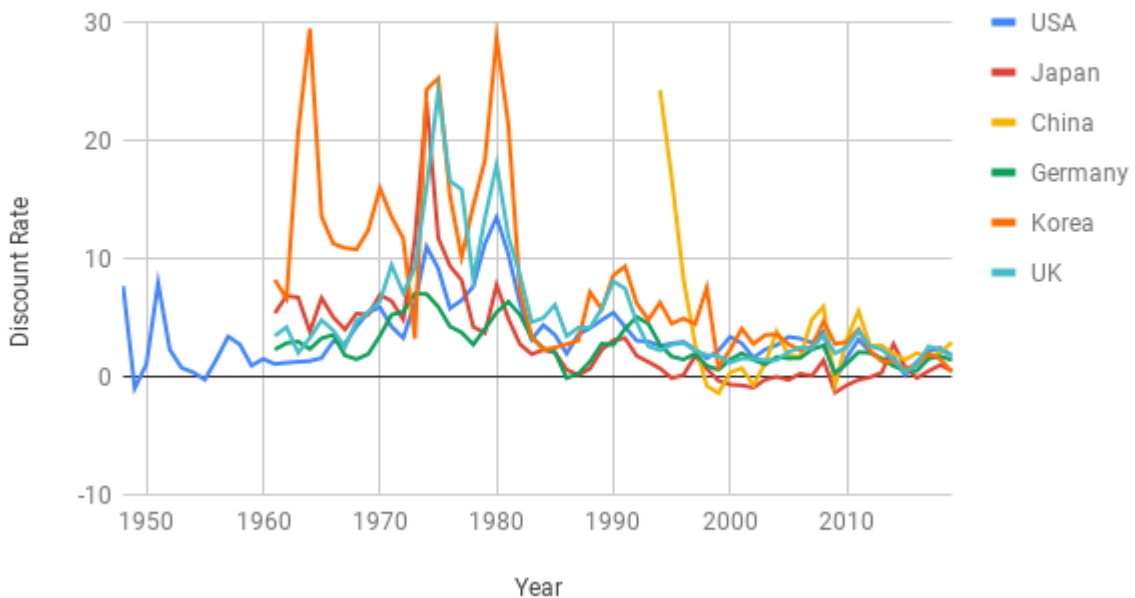
Of the remaining countries in this study, China has maintained the highest discount rate since the 2008 financial crisis at roughly 3%. Over that same period, the United States has maintained a rate of less than 1%, only peaking above 1% since 2015 as it begins to practice more austerity. Conversely, Germany and South Korea held rates above 1% until the last several years, with rates now heading lower. Japan has held rates below 1% for the last 20 years.

Figure 4
Central Bank Discount Rate



Source: International Financial Statistics (IFS), International Monetary Fund (IMF)

Figure 5
Consumer Inflation Rate (%)



Sources: US Bureau of Labor Statistics; National Bureau of Statistics of China; Ministry of Internal Affairs & Communications, Japan; Federal Statistics Office, Germany; Statistics Korea; Statistics Singapore

With such low discount rates and such high levels of monetary easing, one would expect high inflation levels to be prevalent across the globe. This has not occurred (Figure 5). The highest inflation rates were measured in the United States (1.8%), the United Kingdom (1.7%), and China (2.9%) with other countries experiencing less than 1.5% inflation. Japan has fluctuated between inflation and deflation over the past 20 years.

Exchange Rates

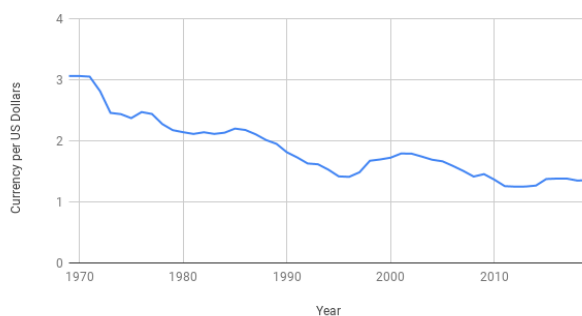
While several currencies have been depreciating against the US Dollar since 2014, this is not indicative of their long-term trends (Figure 6). Since WWII, the currencies of Japan, Germany, and Singapore have all appreciated compared to the United States dollar, with most of the appreciation occurring after the elimination of a gold backing.

Figure 6

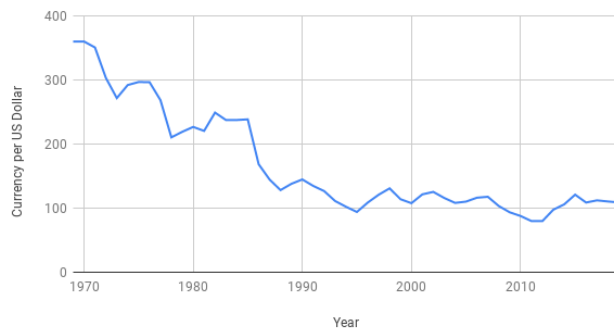
Exchange Rates South Korea (Won)



Exchange Rates Singapore (Singapore Dollar)



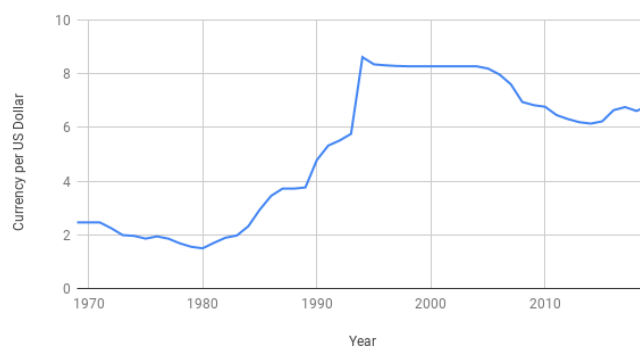
Exchange Rates Japan (Yen)



Exchange Rates Germany (Deutschmark and after 2000 Euros)



Exchange Rates China (Yuan Renminbi)



Source: Penn World Tables

Chapter 3: Economic Indicators

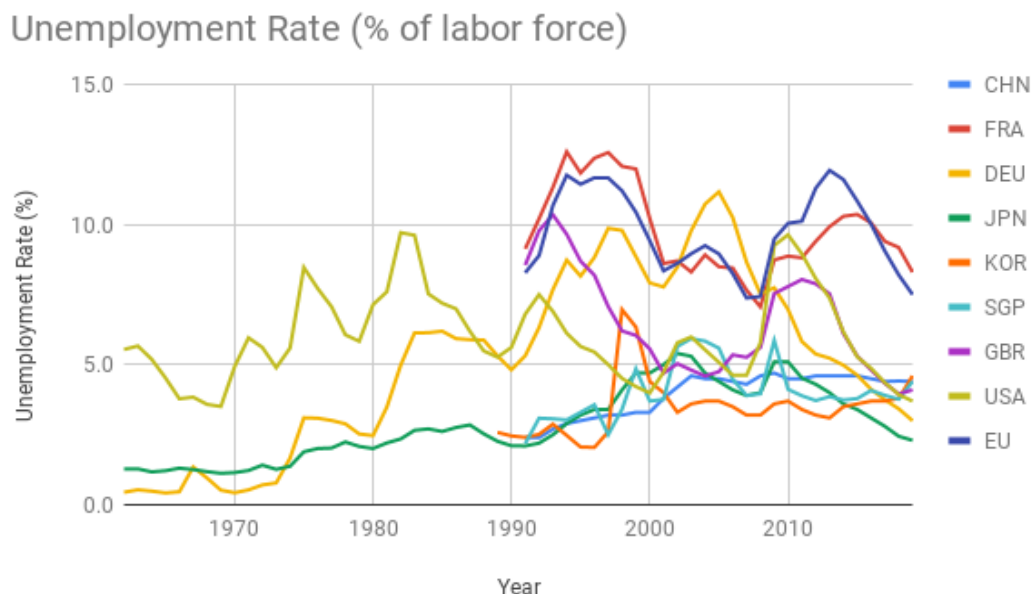
Highlights

- Unemployment rates are higher in Germany and the US than in Asian countries.
- Singapore has passed the US as the top per capita income earner.
- Non-supervisory workers are leaving high paying manufacturing jobs in the US.
- The US is highest in wealth and lowest in wealth equality.
- The US has one of the highest household debt levels as a percentage of GDP.

Unemployment and the Labor Force

After the financial crisis in the United States, unemployment has finally fallen back to what many economists believe to be its natural rate of 5% or less (4.9%). Even at this level, the United States has the highest unemployment rate amongst the countries of comparison since the financial crisis. In fact, Figure 7 indicates that the United States and Germany have historically higher unemployment rates than their Asian counterparts. Data from 2020 will show a spike in unemployment with government-mandated shut-down of the economy to combat COVID-19.

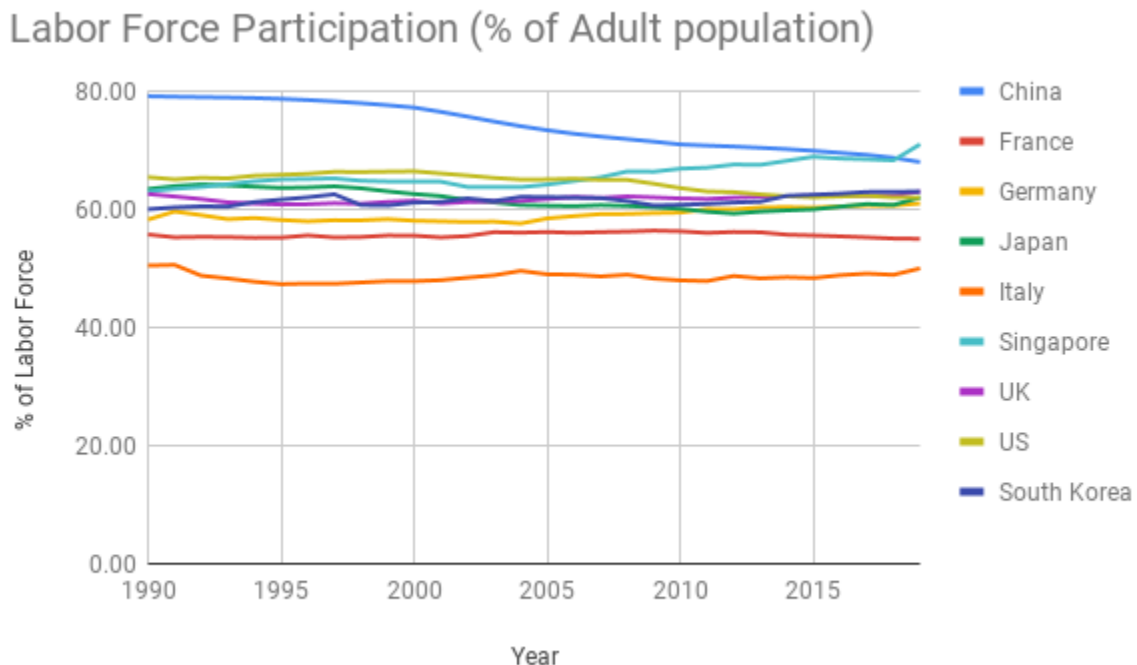
Figure 7



Sources: OECD and World Development Index, World Bank

In addition to suffering higher unemployment on average, the United States has seen a decrease in labor force participation since 2000, dropping from 67% to 62% (Figure 8). If the decrease represents discouraged or marginalized workers who have dropped from the labor force but would rather be employed, then the jobless situation is worse than is represented by unemployment statistics. Data from 2020 will show a further marked decline in labor force participation in the wake of the COVID-19 pandemic.

Figure 8



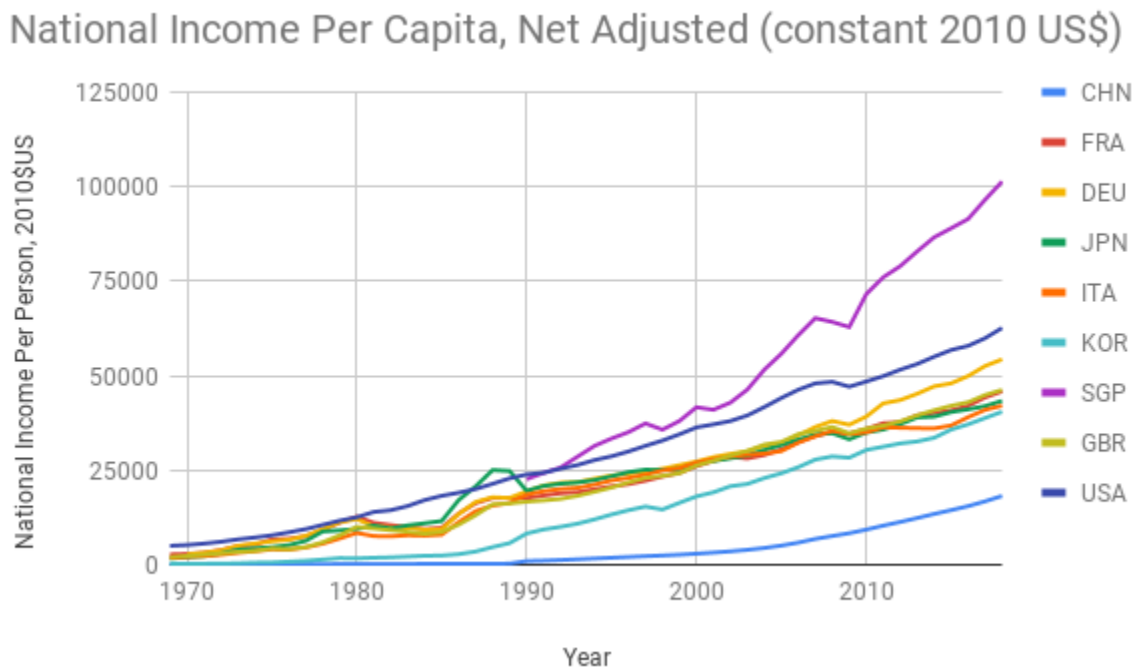
Sources: OECD and World Development Index, World Bank

For 25 years (1980 – 2005), the United States showed higher labor force participation than all other countries except China. This could be a positive if it indicates that there are ample jobs available, or a negative that reflects a scarcity of leisure time. Either way, the trend of decreasing labor force participation is not being copied in Germany, Singapore, or South Korea.

Income and Income Inequality

National income (GDP) that has been adjusted for differences in purchasing power between countries can be used as a measure of average income (Figure 9). By this measure, the United States is no longer the leader in average income (\$62 thousand USD). That distinction belongs to Singapore (\$101 thousand USD). While the United States has one of the highest average incomes in the world, Figure 9 shows that other countries are catching up (Germany, South Korea, China).

Figure 9

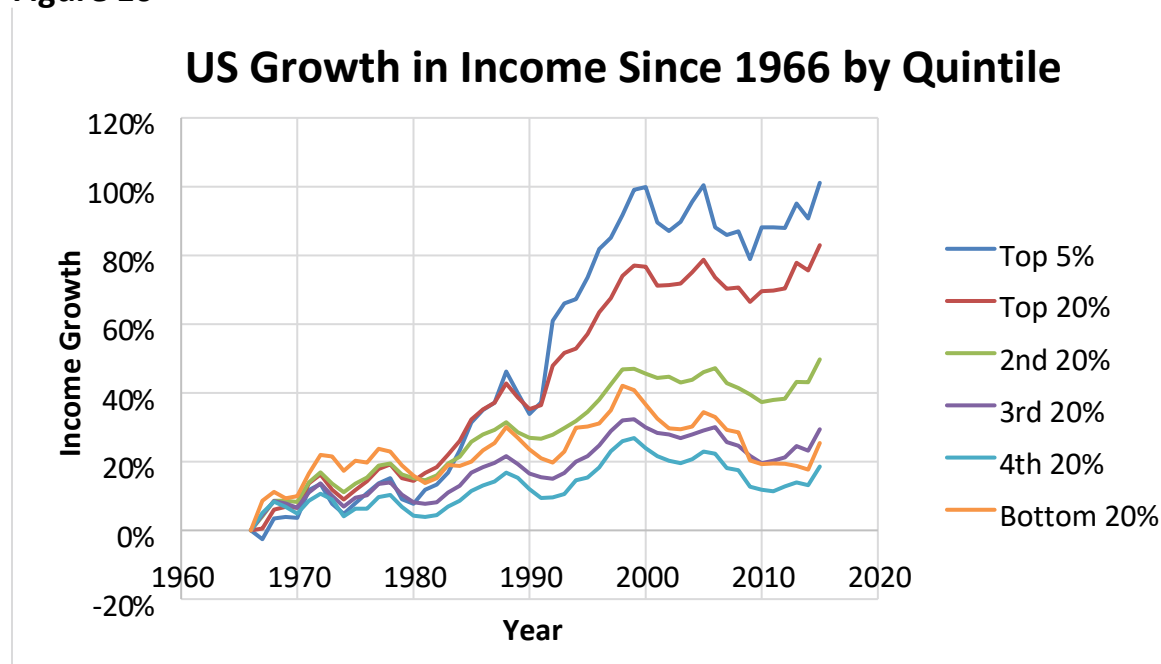


Income inequality in the US has increased significantly over the past 50 years (Figure 10). Income growth for the lowest 60% of income earners fell from the late 1990s through 2015. Income has grown for the top 40% of income earners during the same period. The most recent data shows an increase in incomes for all groups, however. The most striking rise in incomes occurred during the 1990s for the top 5%, which coincided with the dot-com bubble.

From 1967 to 2018, the bottom 20% of income earners have seen a 25% increase in income. This entire increase occurred before 1994 as incomes for this group have been stagnant ever since. The next 20% are even worse off, with their incomes growing by 19%, and less access to social programs than the bottom group due to earnings limitations.

In contrast, the top 20% of income earners have experienced an 83% increase in revenues, with the top 5% experiencing a 101% increase since 1967.

Figure 10



Source: Census Bureau

Non-supervisory Employees

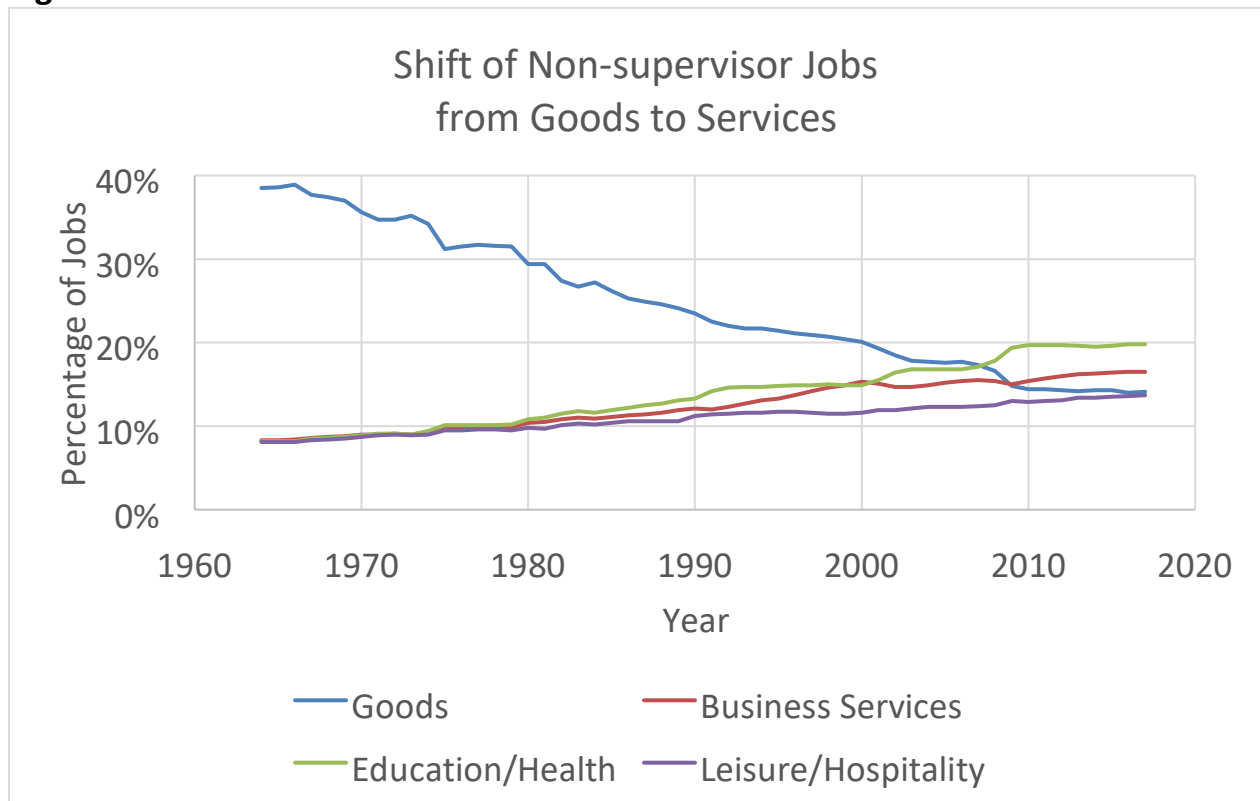
Table 3: Non-supervisory Employees (Wages in Real 2019 Dollars)

Year	1964	2019
% Jobs in Goods	39%	15%
% Jobs in Services	62%	85%
Weekly Wages in Goods	\$777	\$944
Weekly Wages in Services	\$720	\$699

Source: Bureau of Labor Statistics, Current Employment Survey

Another way to investigate the economic condition of the typical worker is by studying employment and wage trends of non-supervisory employees. According to the Current Employment Survey (CES) of the Bureau of Labor Statistics (BLS), the percentage of non-supervisory jobs in goods production (manufacturing and construction) has decreased from 39% to 15%, with service sector jobs increasing from 62% to 85%. Additionally, real wages (after correcting for inflation) have decreased on average in service sectors while they have increased in goods sectors (Table 3).

Figure 11

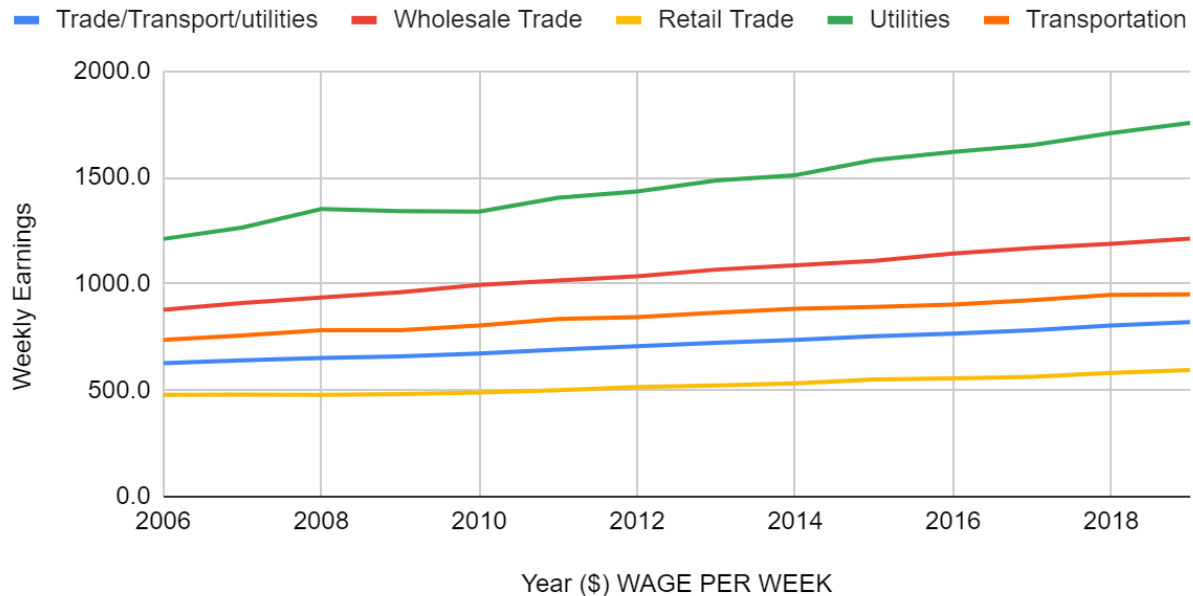


Source: Bureau of Labor Statistics, Current Employment Survey

As demonstrated in Figure 11, the main service sectors that see an increase in percentage of jobs from 1964 to 2017 are business services (8% to 17%), education/health (8% to 20%), and leisure and hospitality (8% to 14%). In all three cases, the wages of the sectors replacing the loss of manufacturing jobs have lower wages than the jobs that they replace, and sometimes considerably lower as in the case of leisure and hospitality.

Figure 12

US Wages, Non-Supervisory Employees Real 2019 Dollars per Week



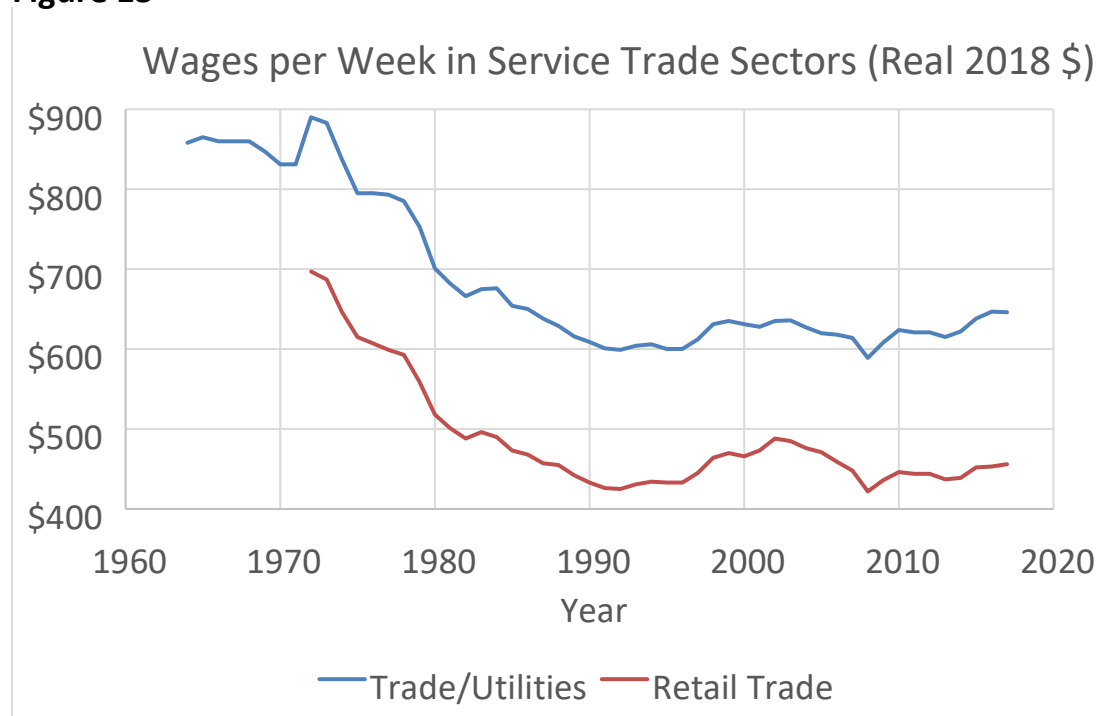
Source: Bureau of Labor Statistics, Current Employment Survey

In 2019, the average wage for retail is 594 / week (Figure 12). The loss of higher paying manufacturing and construction jobs are predominantly moving into these three lower paying sectors such as retail.

One group of sectors placing significant downward pressure on service wages are the trade sectors, and particularly, the retail trade sector (Figure 12). In 2017, trade and utilities accounted for 23% of all non-supervisory jobs, with 13% being attributed to retail trade. From 1964 to 2018, average weekly wages for the trade sectors dropped from \$858 to \$646, with retail trade wages dropping from \$697 to \$456 since 1972.

Although Figure 12 shows wages for the utility and retail sectors climbing since 2006, Figure 13 shows that real wages have declined over the longer term. Since 1970, wages in the utility sector have declined about 22%, and wages in the retail sector have declined about 35%.

Figure 13



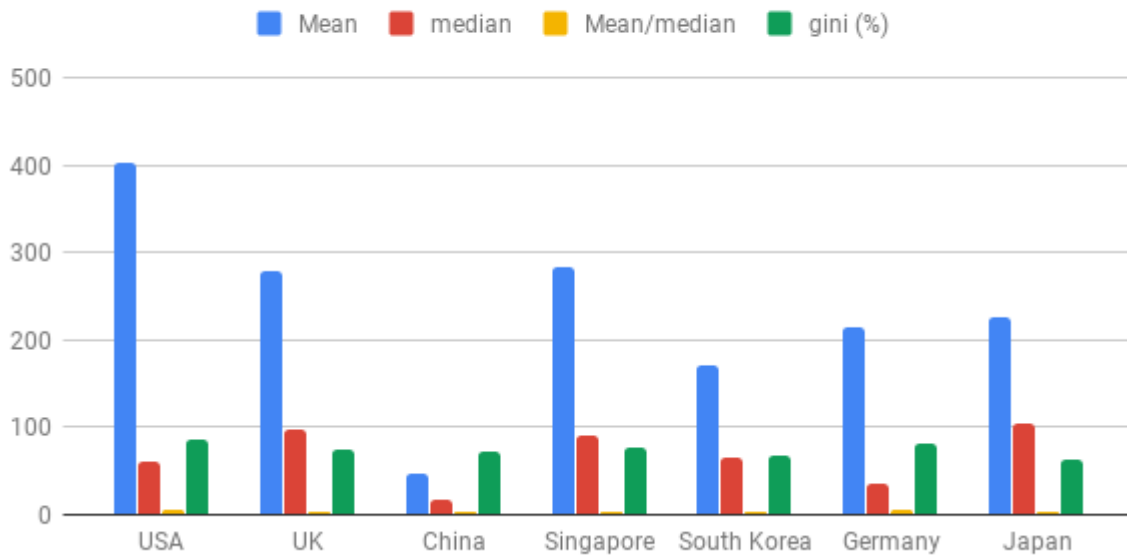
Source: Bureau of Labor Statistics, Current Employment Survey

Wealth and Wealth Inequality

As of 2018, the United States tops the comparison group with respect to average accumulated wealth per adult (\$403 thousand USD). The next highest nation is Singapore (\$283 thousand), with the lowest nation being China (\$47 thousand). Home ownership does not appear to be an indicator of wealth as China and Singapore have the highest rates of home ownership by far (90% and 91% respectively), yet reside on opposite ends of the wealth spectrum (Figure 14).

Figure 14

Adult Wealth (Thousands of US Dollars) (Higher Gini % Signifies Higher Inequality)



	USA	UK	CHN	SING	SK	GER	JAP
Mean Wealth	403.97	279.04	47.81	283.11	171.73	214.89	227.23
Median Wealth	61.66	97.169	16.33	91.65	65.46	35.16	103.86
Mean/Median	6.6	2.9	2.9	3.1	2.6	6.1	2.2

Source: Credit Suisse Global Wealth Databook

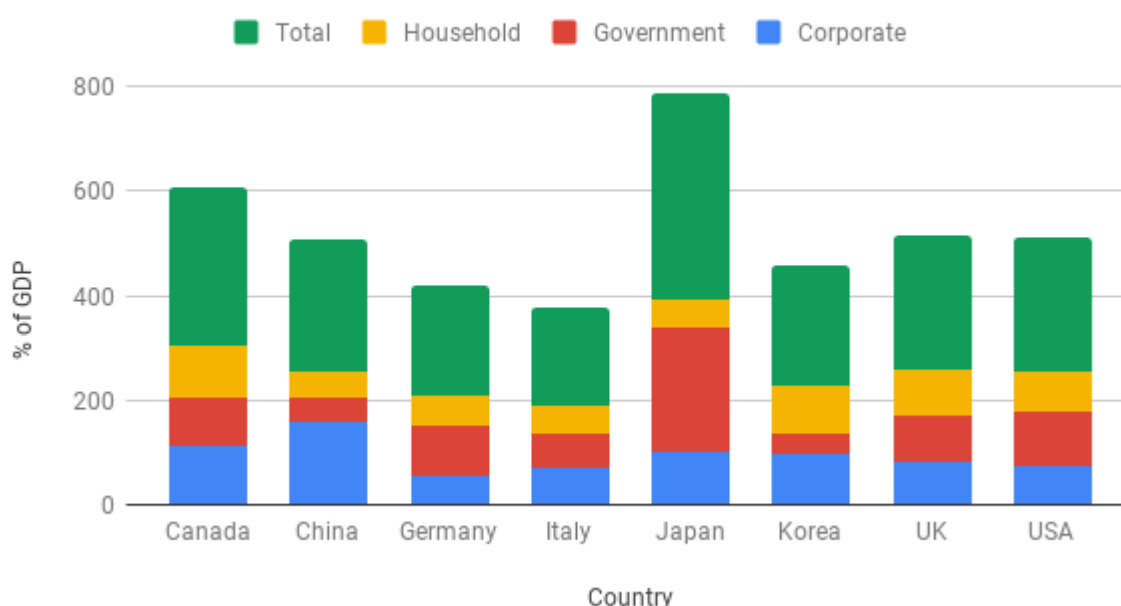
While the U.S. has the highest average wealth, it also has the most unequal distribution of wealth, with the highest Gini coefficient and mean/median ratio. In fact, when we look at median wealth rather than mean wealth, we find the typical adult has more wealth in most other countries than in the U.S., which at \$61,000 is only ahead of China (\$16,000) and Germany (\$35,000).

Private and Public Debt

United States households hold debt equaling 77% of GDP. Adding in corporate and public debt, the US holds total debt equaling 256% of GDP, third to the United Kingdom, Japan being the number one leader overall. (Figure 15).

Figure 15

Estimate of Debt and it's Components, % of GDP



Component	Canada	China	Germany		Italy	Japan	Korea	UK	USA
Corporate	114.5048	157.4348	54.38847		72.6448	99.87973	97.72233	83.06197	73.24032
Government	89.72657	46.96003	96.80129		63.85187	237.6471	37.128	87.52462	105.1994
Household	100.0208	49.21803	58.62207		52.72978	57.0429	94.19397	86.34994	77.6622
Total	304.25217	253.61286	209.81183		189.22645	394.56973	229.0443	256.93653	256.10192

Sources: OECD, Bank for International Settlements

Chapter 4: Social Indicators

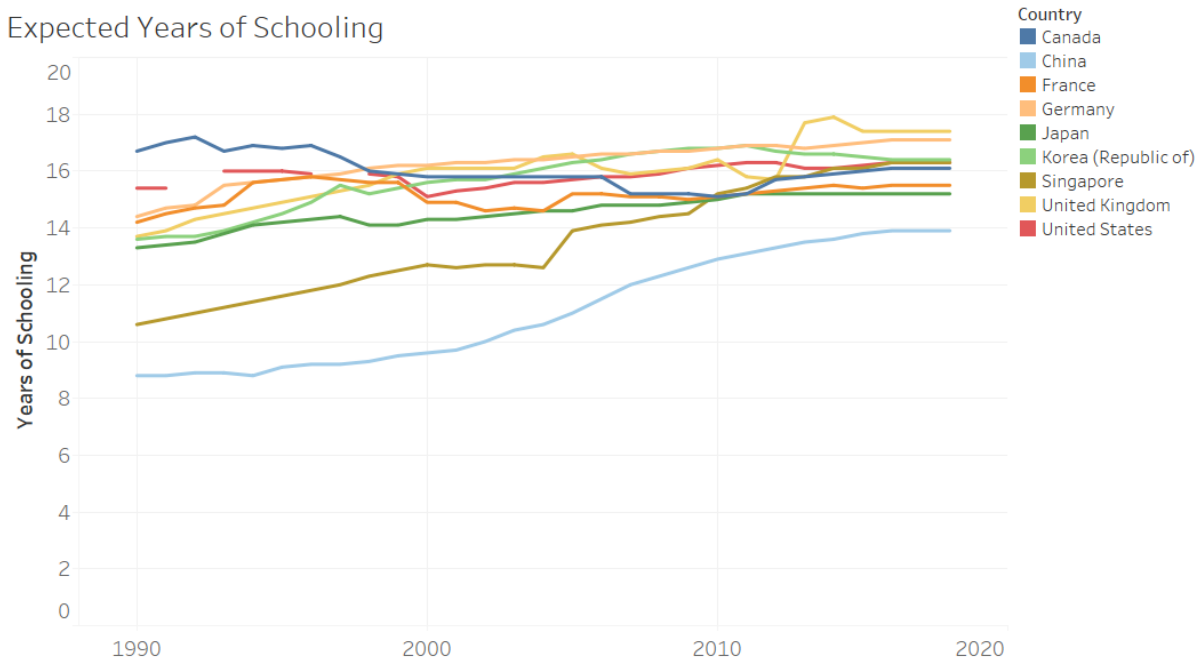
Highlights

- The US is a top nation in years of schooling.
- The US spends more on health care (% of GDP) than any other nation.
- US health outcomes do not match spending levels.
- Several features of the US healthcare system make it difficult to control costs.

Education

As part of its Human Development Index, the United Nations Development Program tracks information regarding health, education, and incomes for most countries. For our comparison group, all countries have seen an increase in years of schooling since 1990 (Figure 16).

Figure 16

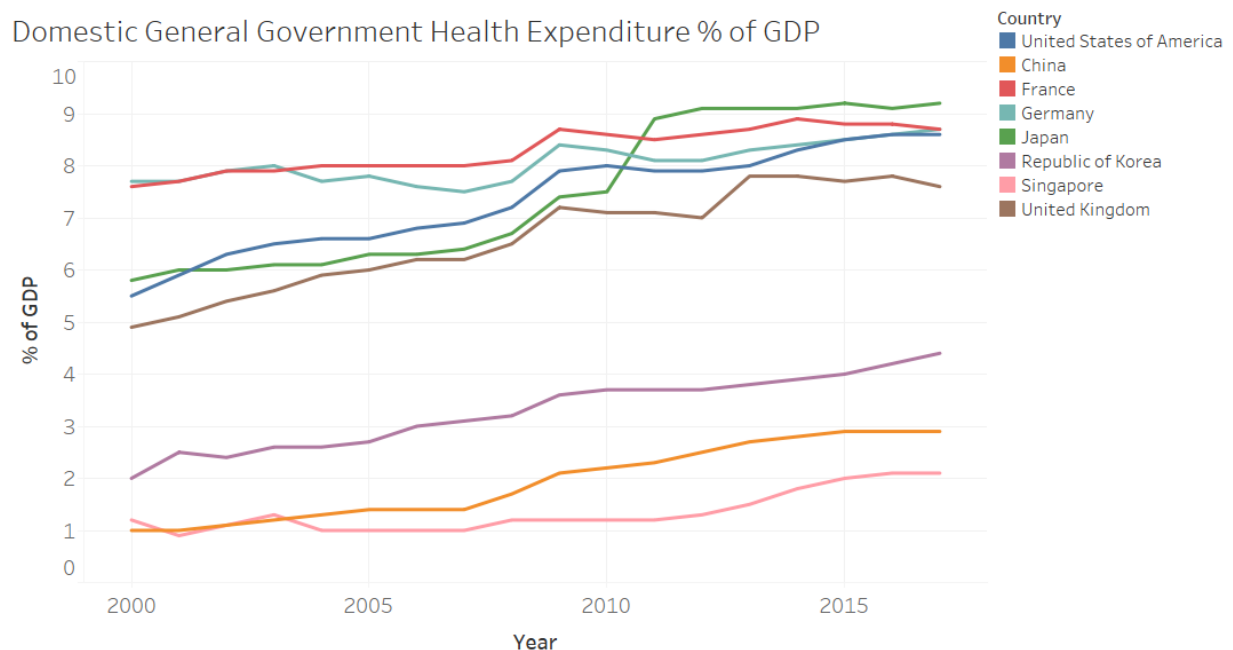


Source: United Nations Development Program

Health Care

While the United States has been falling behind with respect to health outcomes, it is a world leader in health care expenditures. Amongst the comparison group, the US has been second only to Germany regarding government expenditures on health care (Figure 17). This was true even before the passing of the Affordable Care Act when the United States was the only country in the comparison group not to provide universal health care.

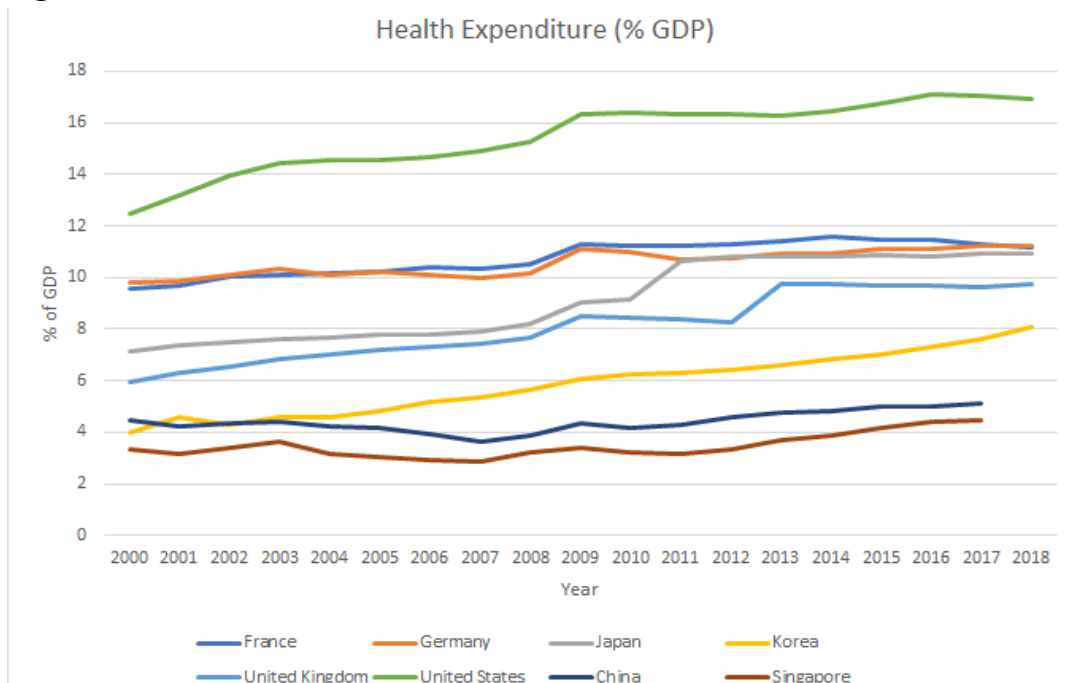
Figure 17



Source: United Nations Development Program

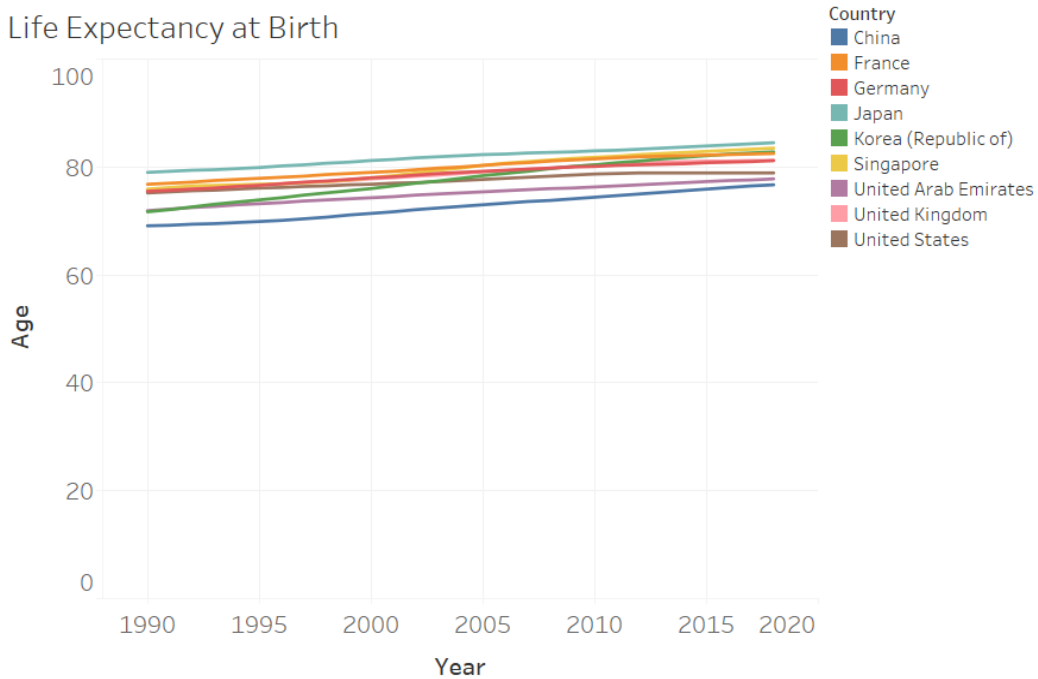
Adding in the cost of private care for each country makes the United States the largest spender on health care by far (Figure 18), spending 17.07% of GDP compared to 10.93% for the next closest country, Japan.

Figure 18



Source: OECD Health Statistics, World Bank

Figure 19



Source: United Nations Development Program

Figure 19 shows life expectancy at birth over time, with the U.S. (78.5 years) leading only China (76.4 years), even though the U.S. spends a larger share of its GDP on health care than any other nation.

Many economists believe that the fragmented nature of the United States healthcare system drives costs higher. Low-income children have Medicaid, the elderly have Medicare, and the rest of the population has employer-based plans as well as marketplace plans under the Affordable Care Act (ACA). Countries that offer simpler forms of universal care often have price controls (or simply allocate care), which keeps costs down. Table 4 offers a summary of the various health care plans.

With the adoption of the ACA, the United States has moved closer to Germany in mandating the purchase of health insurance while providing subsidies for low income individuals. However, Germany also implements cost controls and forbids insurers from making a profit on services offered under the mandated plans. With numerous non-profit insurers competing for subsidies and insurance dollars, costs are controlled in a manner not available to the US system and its mandate.

Table 4: Health Care Structure, Select Countries

Country	Year Implemented	Plan	Source
United States	2010	Mandatory Health Coverage - Medicare/Medicaid for applicable groups. Mandatory insurance - Low-income subsidies - State Level for profit insurance pools	The Commonwealth Fund at international.commonwealthfund.org/countries/united_states/
China	1980 in decentralized form	Universal Health Coverage Public financed insurance - Local governments administer Low income safety net	The Commonwealth Fund at international.commonwealthfund.org/countries/china/
Japan	1961	Universal Health Coverage Subsidies to providers/insurers Patients have minor co-pay Fees set by government	The Commonwealth Fund at international.commonwealthfund.org/countries/japan/
Germany	1993 in its current form, but the system dates back to 1883	Mandatory Health Coverage Mandatory insurance - Non-profit competing insurers Pay-roll/unemployment deduction to pay system and safety-nets	The Commonwealth Fund at international.commonwealthfund.org/countries/germany/
South Korea	1977 with universal coverage by 1989	Universal Health Coverage - Single payer Decentralized operations	Republic of Korea Health System Review, Health Systems in Transition, Vol. 5, No. 4, 2015, accessed at: www.wpro.who.int/asia_pacific_observatory/hits/series/korea_health_systems_review.pdf?ua=1
Singapore	1983	Universal Health Coverage - Income dependent subsidies Mandatory savings - Price controls	The Commonwealth Fund at international.commonwealthfund.org/countries/singapore/

Source: International Commonwealth Fund

Chapter 5: Government Policy

Highlights

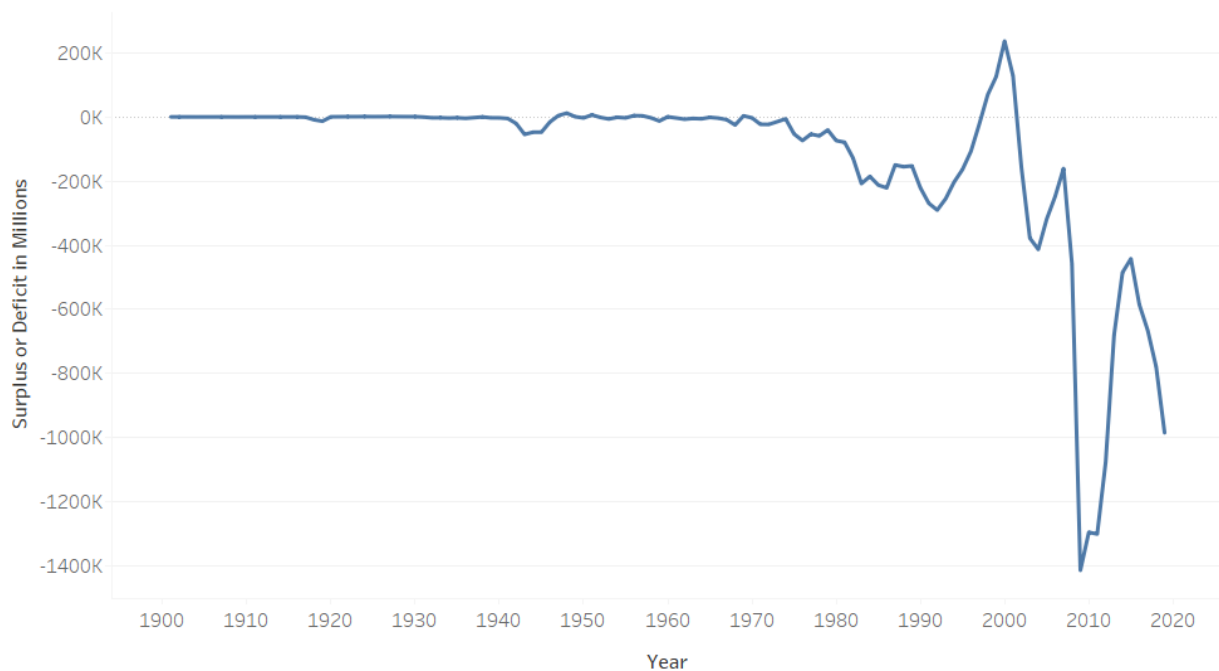
- The governments of Japan and the US carry the most debt.
- Japan's government carries debt equaling 234% of GDP.
- The United States has the largest foreign debt exposure at 37% of GDP.
- The US spends the largest percentage of its GDP on the military.
- While China's tariffs have decreased, they are still over double US values.

Budgets and Debts

Except for a four-year period at the end of the Clinton administration, the United States has run a national budget deficits every year since 1970 (Figure 20).

Figure 20

US Federal Surplus or Deficit

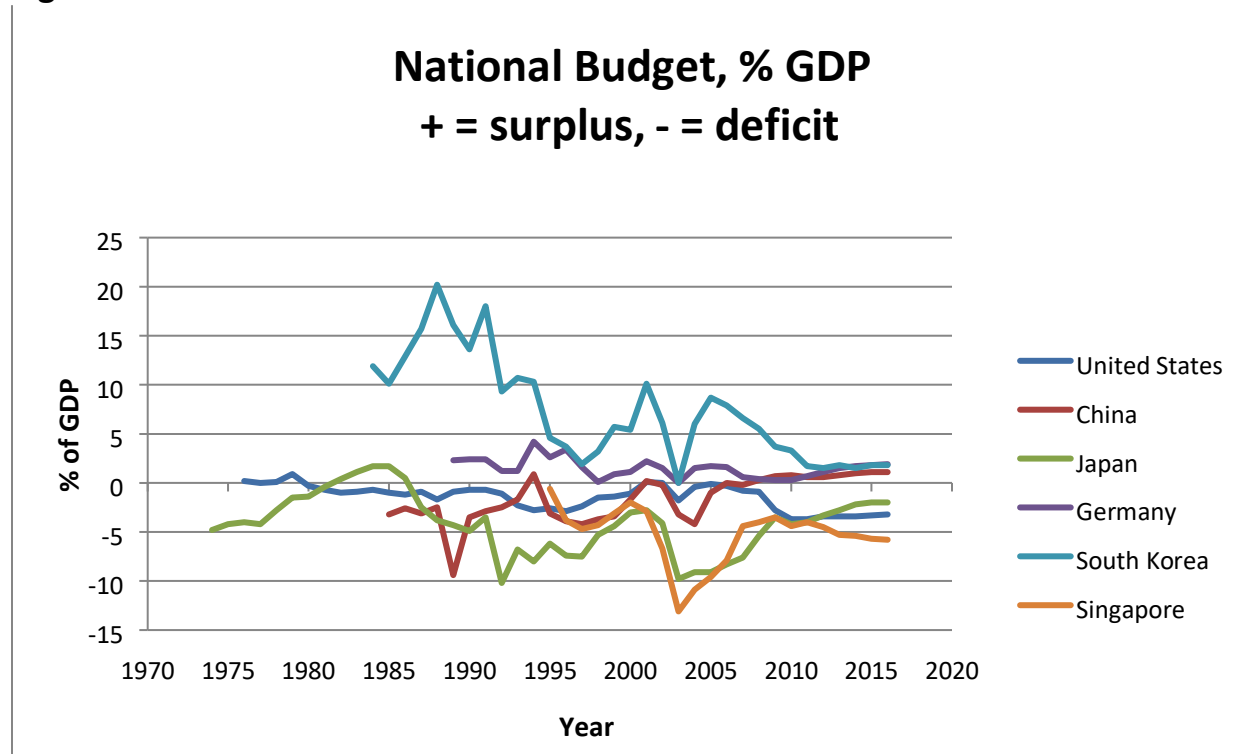


Source: St. Louis Fed

The US is not unique in carrying ongoing deficits as Japan, Singapore, and until recently China, have operated with losses for much of the past 30 years (Figure

21). In this group, only Germany and South Korea have managed consistent surpluses.

Figure 21



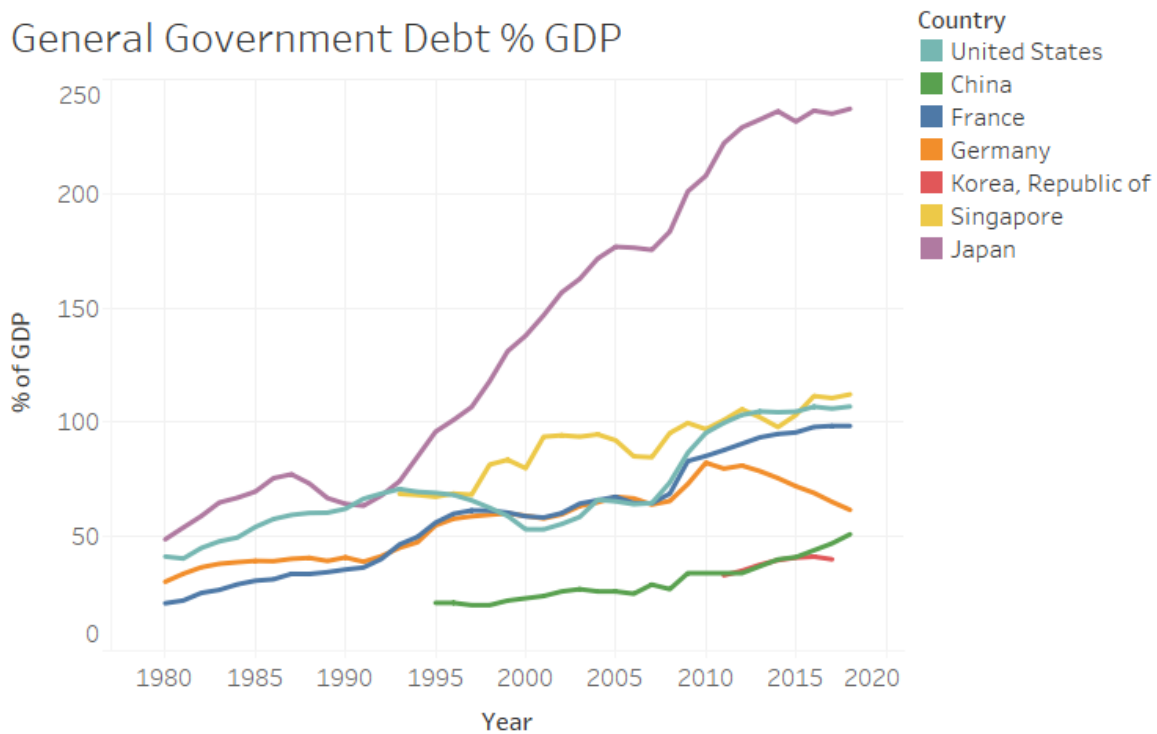
Source: OECD Data

Of this group, Japan has managed to accumulate the largest government debt as a percentage of GDP, totaling 232% (Figure 22). The United States is a distant second carrying debt just over 100% of GDP. The lowest debt load is carried by South Korea at 36% of GDP.

However, total government debt does not tell the whole story as some may be owed to a country's own citizens while some will be due to foreign entities. For instance, of Japan's 232% debt, 208% is owed to domestic entities with a small portion due overseas (Figure 23). Within our comparison group, the United States government maintains the greatest holdings of debt to foreigners (37%).

Figure 22

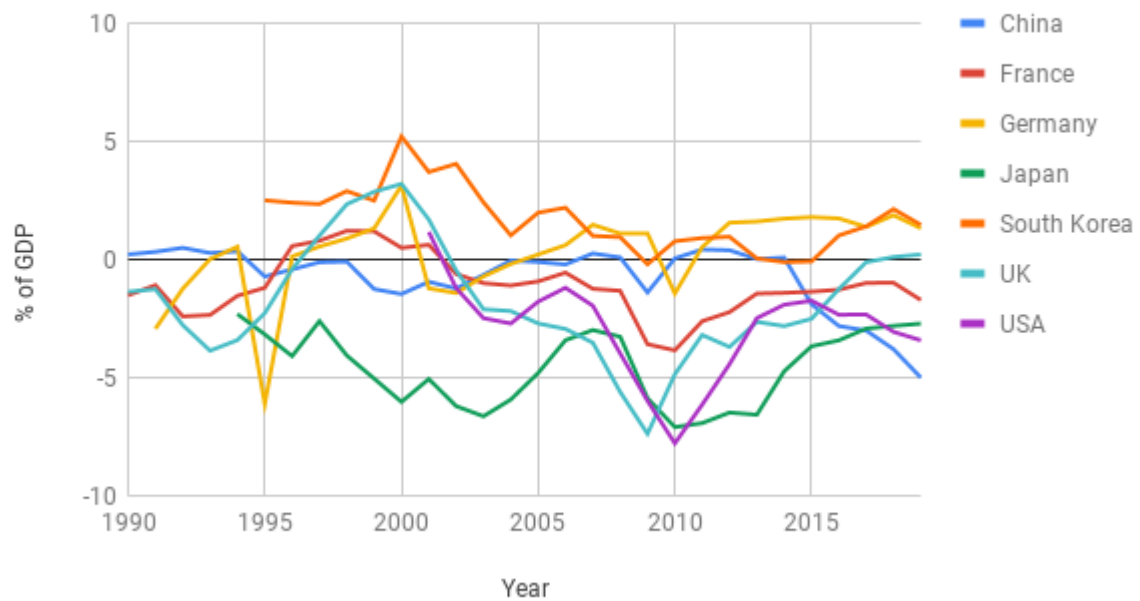
General Government Debt % GDP



Source: International Monetary Fund

Figure 23

National Debt % of GDP

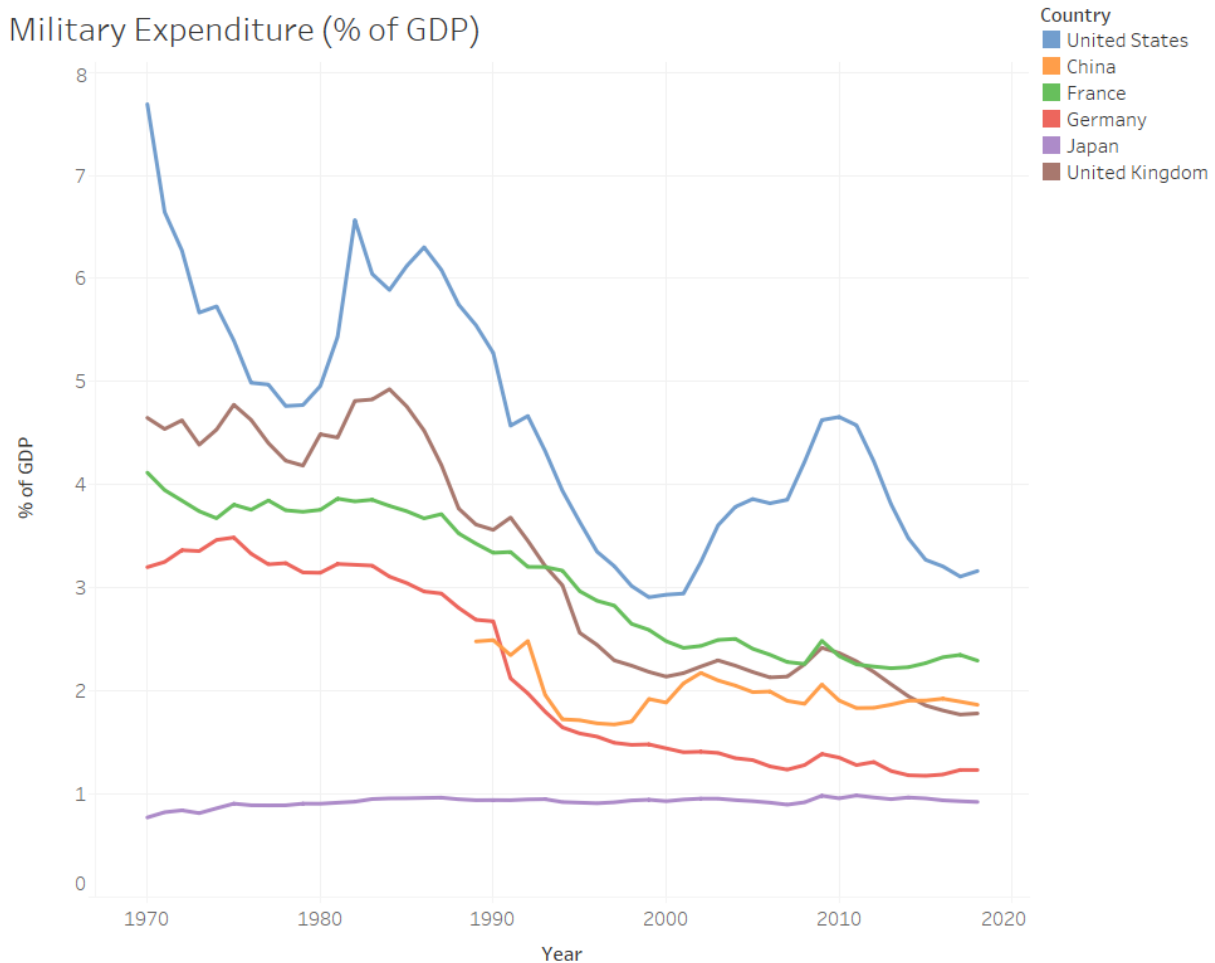


Source: CEIC

Military Spending

While the United States leads the world in dollar denominated military spending, it also leads the comparison group in military spending as a percentage of GDP (3.14%). The two most cautious spenders are Germany and Japan (Figure 24), two countries the US has had a role in protecting since World War II. In 2019 Germany agreed to increase its military spending to 2% of its GDP by the 2030s.

Figure 24



Source: World Development indicators, World Bank

Tax and Tariff Rates

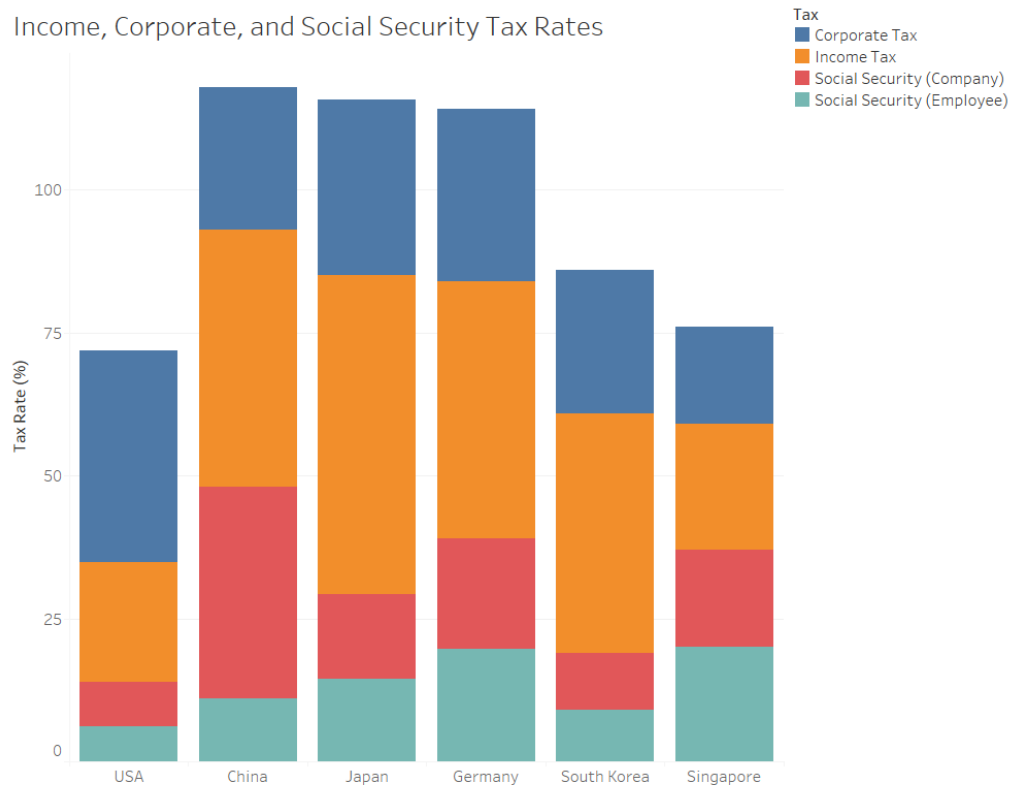
In recent history, China and South Korea have had the most aggressive tariff rates on manufactured goods, with Singapore locating at the other end of the spectrum while operating an open economy (Figure 25).

Figure 25



Source: Trading Economics

Figure 26



As of May, 2020	USA	China	Japan	Germany	South Korea	Singapore
Corporate Tax	37	25	30.62	30	25	17
Social Security (Company)	7.65	37	14.75	19.44	9.96	17
Social Security (Employee)	6.2	11	14.45	19.63	8.98	20
Income Tax	21	45	55.95	45	42	22

Source: Trading Economics

While China's tariff rates have decreased, they are estimated to still be over double the tariff rates in the United States for manufactured products (3.8% vs. 1.7%).

Regarding tax policy, the United States maintains the highest rate on corporations (38.9%) while Japan has the highest top income tax rate and China charges the most for social security, although over 75% of the taxes are charged to an employee's company.

Chapter 6: Industrial Indicators

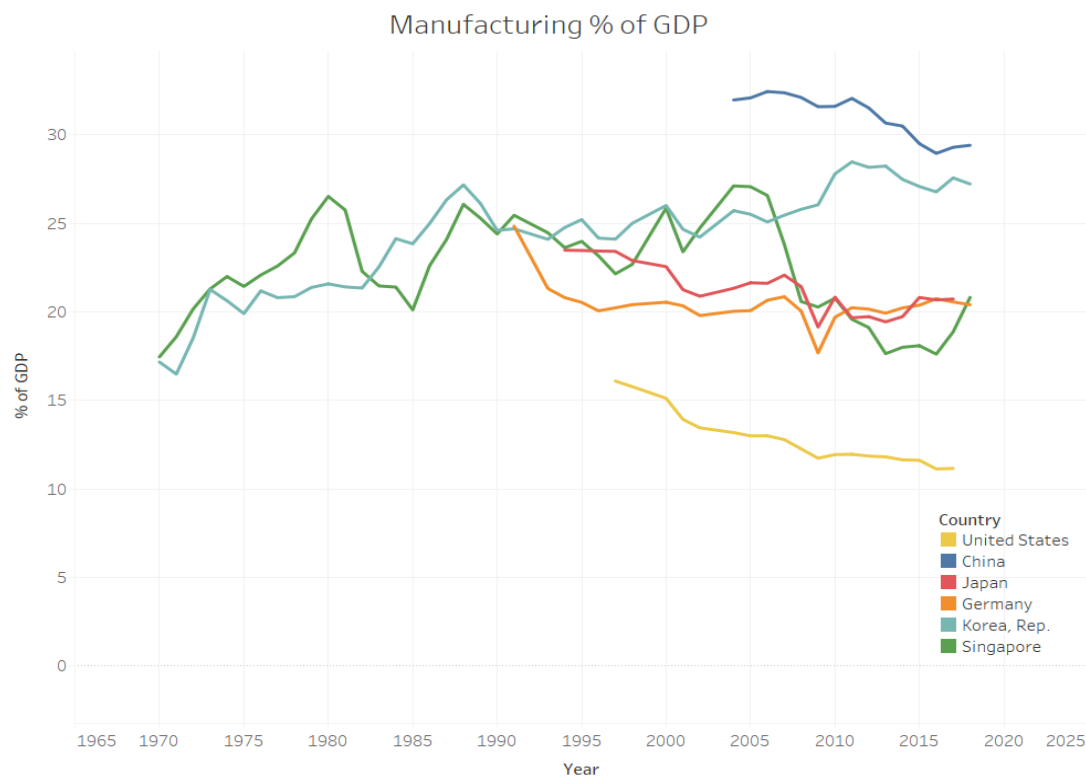
Highlights

- Manufacturing sectors have been on the decline in the United States.
- The US ranks last in production dedicated to manufactured goods.
- Job multipliers are typically higher for manufacturing than for service industries.

The Decline of Manufacturing

In 1987, one Japanese company cracked the top 25 global leaders in revenue. This company is the Toyota Motor Corporation. The other 24 companies were all American. Turn the page to 2015 and only 10 of the top 25 companies are from the United States as industries from developed and developing nations alike have become increasingly competitive over the past 28 years.

Figure 27



Source: World Development Indicators, World Bank

The story is much the same in the US manufacturing sector, which has seen a steady decline over the past half century. Therefore, it should not be surprising to state that within our comparison group, the US ranks last (12%) with respect to the manufacturing contribution to GDP (Figure 28).

Recall the large trade deficits from Chapter 1, which totaled \$16.3 trillion for manufactured products over the past 31 years. Mathematically, this equates to the cost of hiring 6.5 million skilled production workers for 31 years at \$80,000 per year (Table 5). Economically, one cannot conclude that closing the trade deficit would automatically create 6.5 million jobs. However, the calculation does elucidate the scale and weight of such deficits on the United States economy.

Table 5: Manufacturing Labor Costs (2018)

Item	Value	Units	Year
Total Labor Costs	1123.479	Billions of Current Dollars	2018
Employees	12852	thousands of persons	Feb 2020
Costs per Employee	80158.5	USD	2017
	79284.5		2016
	79458.5		2015
Producer Price Index, Manufacturing	197.5		July 2019
	198.5		July 2018
	187.3		July 2017
	183.4		July 2016

Sources: The Conference Board & Bureau of Labor Statistics for PPI

The Benefits of Manufacturing

When attracting industry to our town, the Greater Lafayette Chamber of commerce tries to attract manufacturers instead of service providers. The rationale has two components:

- 1) Most goods can be traded anywhere in the world, creating more exports and generating income from overseas, whereas services are typically limited to local markets.
- 2) Manufacturing positions create more additional jobs in the local community than do service oriented positions. This is the multiplier effect of manufacturing.

Job multipliers indicate how many total jobs will be created within a region due to a new position in a particular industry. Referring to Table 6, traditional manufacturing sectors have larger multipliers than trade and service sectors. Therefore, creating a manufacturing position can be more beneficial to a local economy than creating a service position, even if at the same pay level.

Table 6: Job Multipliers for Select Sectors and Regions

Industry	United States	Japan	EU-27 (Germany)
Chemicals	4.0	5.0	2.3
Transport Equipment	3.2	3.9	2.0
Basic Metals	2.2	3.0	1.7
Electrical Equipment	2.2	2.4	1.8
Machinery & Equipment	2.2	2.4	1.6
Financial Activities	2.1	2.0	1.8
Non-metallic Minerals	1.9	2.0	1.8
Textiles	1.8	1.6	1.5
Construction	1.6	1.7	1.7
Wholesale Trade	1.5	1.7	1.6
Business Service	1.5	1.5	1.5
Accommodation	1.3	1.5	1.4

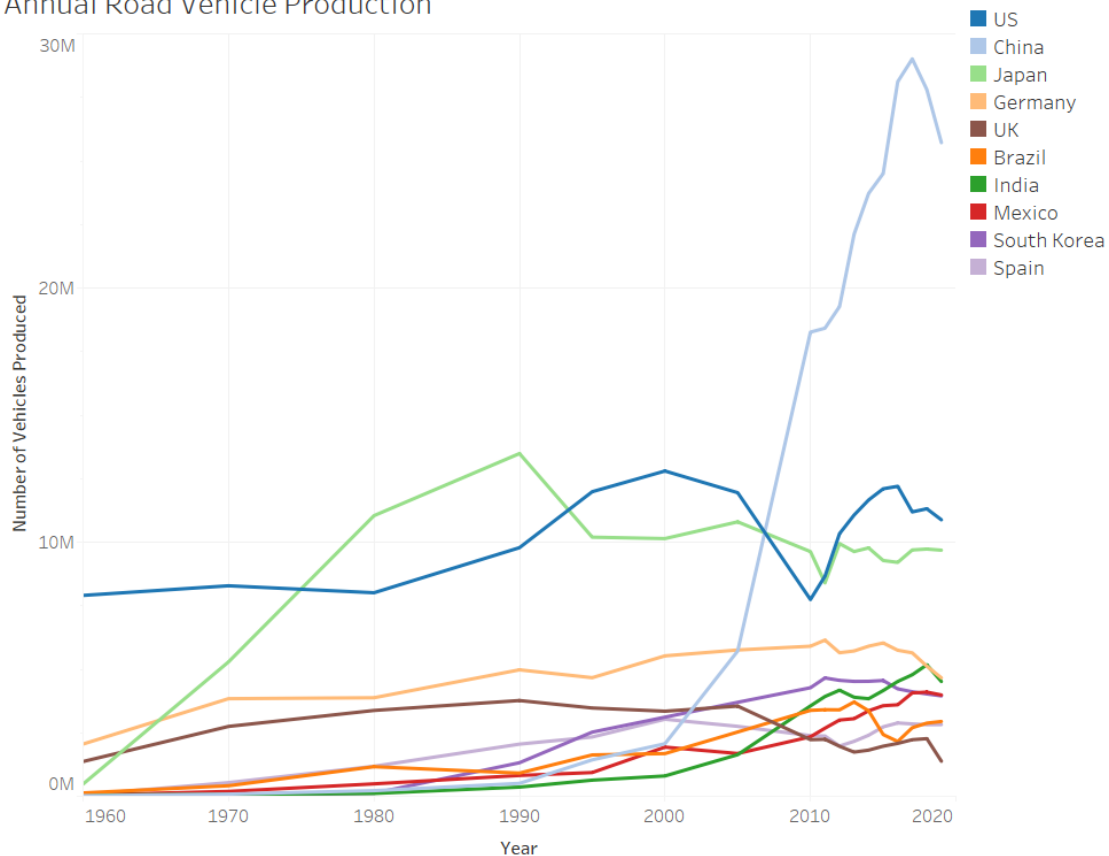
Source: Study on 'Monitoring of Sectoral Employment' by Robert Stehrer and Terry Ward, 2012, The Vienna Institute for International Economic Studies.

Sectoral Comparisons

The following table and graphs demonstrate sectoral trends in automobile, steel, aluminum, and paper production. In all four cases, China has bypassed the other countries in our group with respect to production levels.

Figure 28

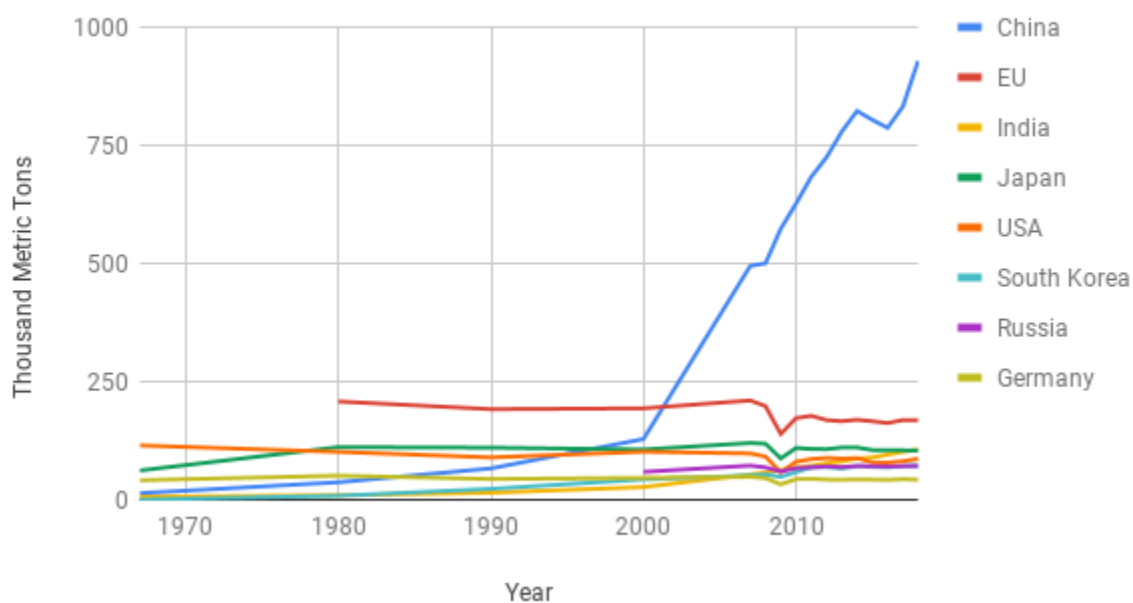
Annual Road Vehicle Production



Source: International Organization of Motor Vehicle Manufacturers

Figure 29

Steel Production



	China	EU	India	Japan	USA	SK	RUS	GER
1990	66.4	191.8	15	110.3	89.7	23.1	-	44
2018	928.3	168.2	106.5	104.3	86.7	72.5	71.7	42.4
% Change	1,298.04	-12.30	610.00	-5.44	-3.34	213.85		-3.64

Table 7: Aluminum Production, Metric Tons

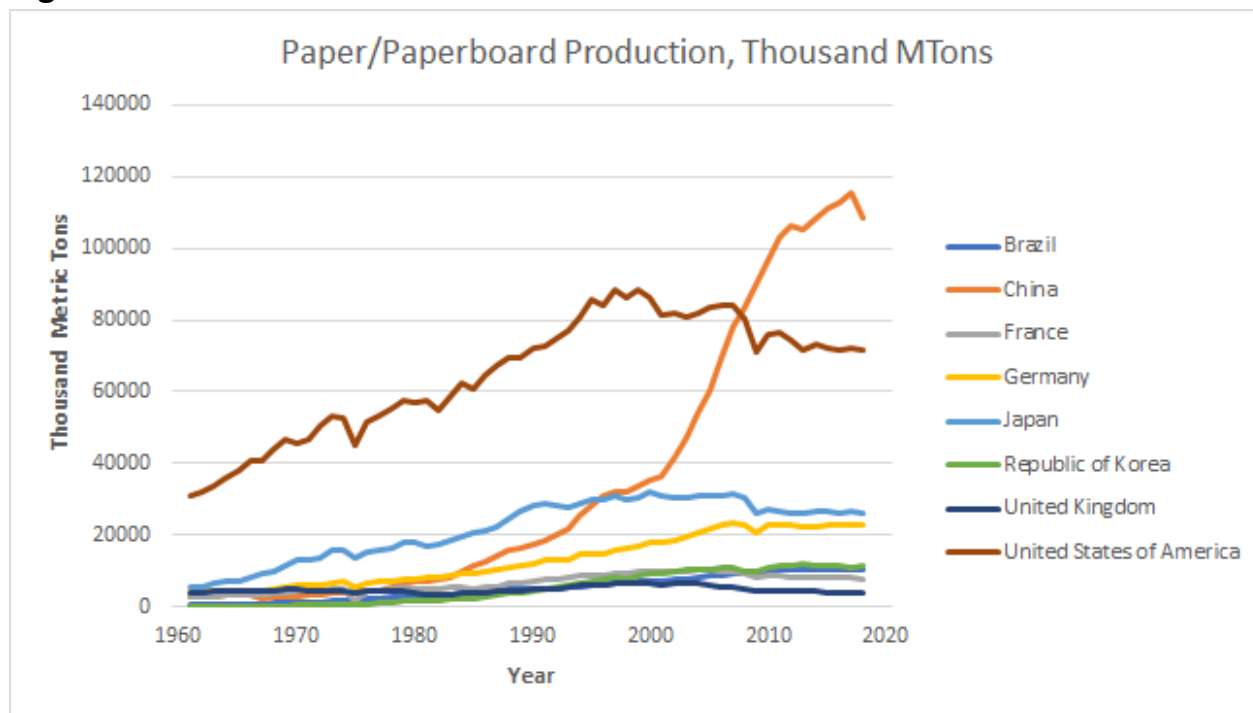
Year	China	France	Germany	India	Italy	Japan	Russia	UK	USA
1990	850	326	740	433	232	34		294	4050
1991	963	286	690	504	206	32		294	4120
1992	1100	418	603	496	161	19	2700	244	4040
1993	1220	426	552	466	156	18	2820	239	3700

1994	1450	438	505	472	176	17	2670	231	3300
1995	1680	372	575	537	198	18	2720	238	3380
1996	1770	380	576	531	184	17	2870	240	3580
1997	1960	399	572	484	188	17	2910	248	3600
1998	2340	424	612	542	187	16	3010	258	3710
1999	2530	455	634	614	187	10.9	3150	272	3780
2000	2800	441	644	644	189	6.54	3250	305	3670
2001	3250	462	652	624	187	6.63	3300	341	2640
2002	4300	463	653	671	190	6.41	3350	344	2710
2003	5450	443	661	799	191	6.46	3480	343	2700
2004	6670	451	668	861	195	6.43	3590	360	2520
2005	7800	442	648	942	193	6.5	3650	369	2480
2006	9360	442	516	1110	194	6.6	3720	360	2280
2007	12600	428	551	1030	183	57	3960	365	2550
2008	13200	389	606	1400	180	59	4190	326	2660
2009	12900	345	292	1600	171	39	3820	253	1730
2010	16200	356	402	1610	168	54	3950	186	1730
2011	18100	334	432	1670	168	48	3910	213	1990

2012	23500	349	410	1704	110	26	4024	60	2070
2013	26500	346	492	1703		29	3601	44	1946
2014	28300	360	531	1939		46	3300	42	1710
2015	31400	420	541	2355		42	3530	47	1587
2016	31873	425	575	2723		45	3561	48	841
2017	32600	430	580	3200		46.1	3600		740
2018	35800	435	550	3680		47.2	3630		891
2019	36000			3700			3600		1100

Source: United States Geological Series

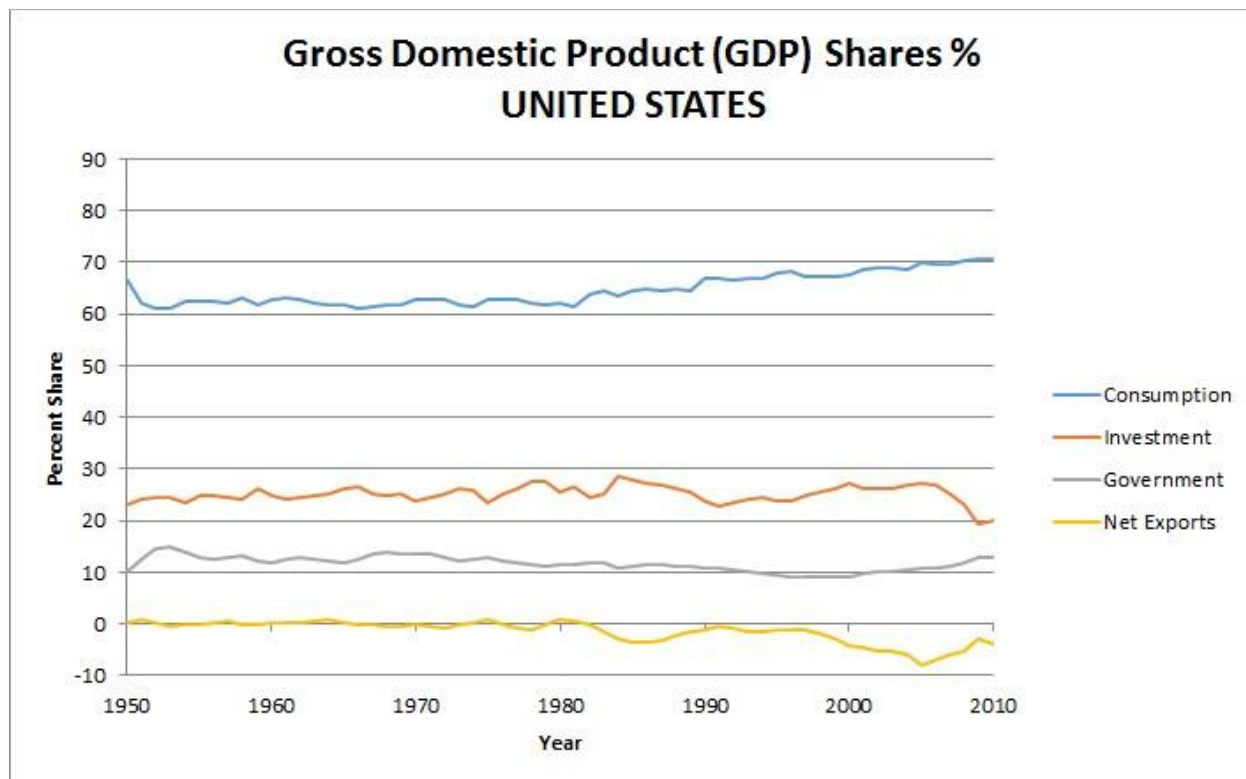
Figure 30



Source: Food and Agricultural Organization of the United Nations, Statistics Division

APPENDICES

Appendix A: National Account Data



Source: Feenstra, Robert C. Robert Inklaar and Marcel P. Timmer (2015), 'The Next Generation of the Penn World Table' American Economic Review, 105(10), 3150-3182, available for download at www.ggd.net/pwt

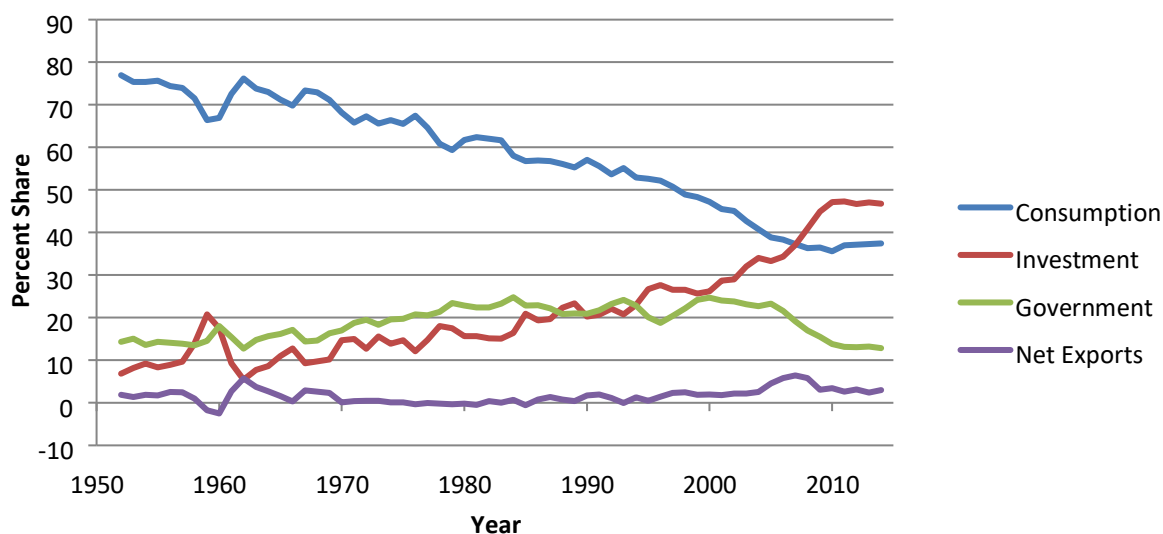
Year	Consumption	Investment	Government	Net Exports
2014	71.7	20.8	11.3	-3.8
2013	71.3	20.6	11.7	-3.5
2012	71.1	20.8	12.1	-4.0
2011	71.6	20.1	12.5	-4.2
2010	70.7	20.1	12.9	-3.7
2009	70.7	19.4	12.8	-3.0
2008	70.2	23.2	11.8	-5.2
2007	69.7	25.2	11.1	-6.0
2006	69.5	26.8	10.8	-7.1
2005	69.8	27.3	10.7	-7.9
2004	68.7	27.0	10.4	-6.0
2003	68.8	26.2	10.3	-5.4

2002	68.9	26.3	10.0	-5.2
2001	68.7	26.1	9.7	-4.4
2000	67.6	27.2	9.3	-4.1

Year	Consumption	Investment	Government	Net Exports
1999	67.4	26.3	9.3	-2.9
1998	67.1	25.5	9.2	-1.9
1997	67.1	25.0	9.2	-1.3
1996	68.2	24.0	9.1	-1.3
1995	67.8	23.8	9.6	-1.2
1994	67.0	24.5	10.0	-1.5
1993	67.0	24.2	10.2	-1.4
1992	66.6	23.4	10.6	-0.6
1991	66.8	22.8	10.9	-0.4
1990	66.8	23.8	10.7	-1.3
1989	64.6	25.6	11.3	-1.5
1988	64.7	26.2	11.3	-2.2
1987	64.6	27.0	11.5	-3.1
1986	64.7	27.1	11.7	-3.5
1985	64.4	27.9	11.2	-3.4
1984	63.4	28.6	11.0	-3.0
1983	64.6	25.1	11.7	-1.5
1982	63.7	24.5	12.0	-0.2
1981	61.5	26.5	11.4	0.6
1980	62.2	25.4	11.4	1.0
1979	61.7	27.5	11.1	-0.3
1978	62.0	27.6	11.4	-1.0
1977	62.7	26.4	11.8	-0.9
1976	62.6	25.2	12.2	-0.1
1975	62.7	23.3	13.0	1.0
1974	61.4	26.0	12.5	0.2
1973	61.6	26.2	12.1	0.0
1972	62.7	25.2	13.0	-0.8
1971	62.7	24.5	13.4	-0.5
1970	62.8	23.7	13.7	-0.2
1969	61.9	25.0	13.7	-0.6
1968	61.9	24.9	13.8	-0.6

1967	61.3	25.3	13.6	-0.2
1966	61.0	26.5	12.4	0.0
1965	61.7	26.0	11.9	0.3
1964	61.8	25.3	12.1	0.8
1963	62.1	25.0	12.5	0.4
1962	62.6	24.4	12.7	0.2
1961	63.2	24.1	12.5	0.2
1960	62.9	25.0	12.0	0.1
Year	Consumption	Investment	Government	Net Exports
1959	61.9	26.1	12.2	-0.2
1958	63.0	24.0	13.2	-0.2
1957	62.2	24.4	12.8	0.7
1956	62.3	24.8	12.5	0.4
1955	62.4	24.8	12.8	0.0
1954	62.6	23.5	13.9	0.0
1953	61.1	24.5	14.8	-0.4
1952	60.9	24.4	14.5	0.2
1951	62.1	24.3	12.7	0.9
1950	66.5	23.1	10.2	0.1

Gross Domestic Product (GDP) Shares % CHINA



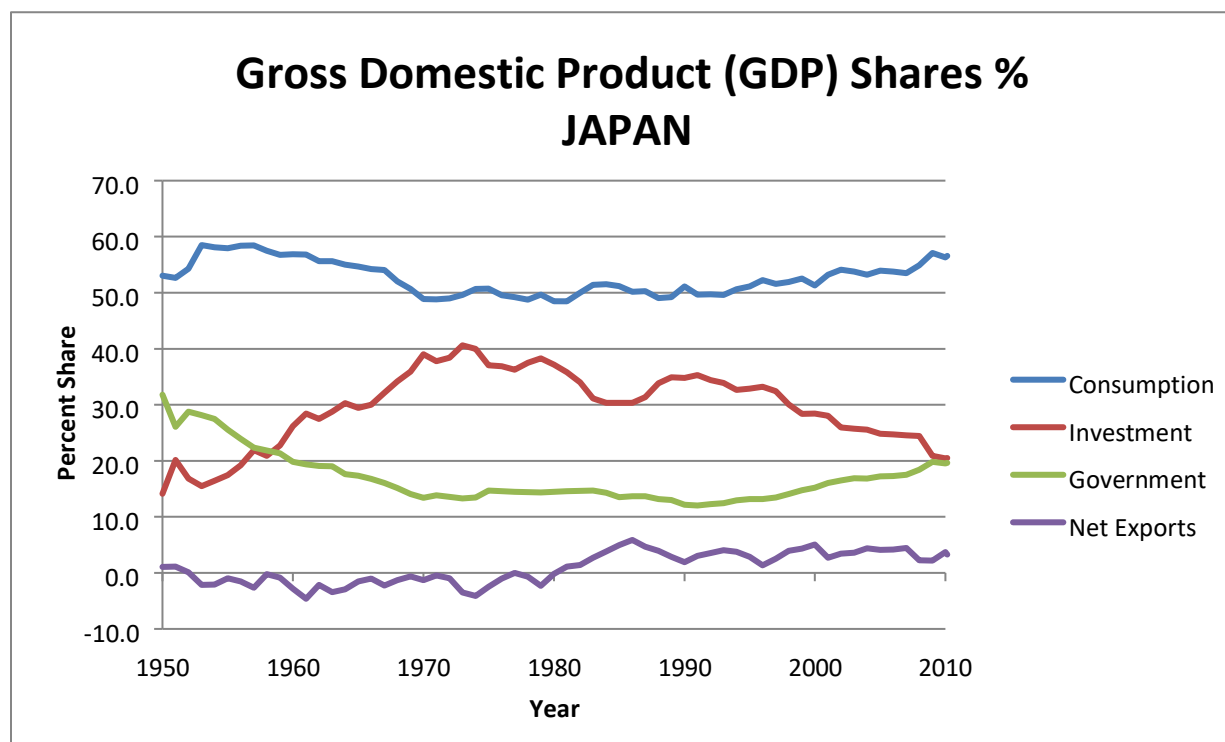
Source: Feenstra, Robert C. Robert Inklaar and Marcel P. Timmer (2015), 'The Next Generation of the Penn World Table' American Economic Review, 105(10), 3150-3182, available for download at www.ggdc.net/pwt

Year	Consumption	Investment	Government	Net Exports
2014	37.4	46.8	12.8	3.0

Year	Consumption	Investment	Government	Net Exports
2013	37.3	47.1	13.2	2.4
2012	37.1	46.7	13.1	3.1
2011	37.0	47.3	13.1	2.6
2010	35.6	47.2	13.8	3.4
2009	36.5	44.9	15.5	3.1
2008	36.3	40.9	17.0	5.8
2007	37.3	37.1	19.2	6.4
2006	38.3	34.3	21.6	5.8
2005	38.9	33.3	23.3	4.6
2004	40.8	34.0	22.7	2.6

2003	42.7	32.0	23.2	2.1
2002	45.1	29.0	23.8	2.2
2001	45.5	28.7	24.0	1.8
2000	47.2	26.2	24.7	2.0
1999	48.3	25.6	24.2	1.9
1998	48.9	26.5	22.2	2.4
1997	50.7	26.6	20.4	2.3
1996	52.2	27.7	18.8	1.4
1995	52.6	26.7	20.1	0.5
1994	52.9	23.0	22.8	1.3
1993	55.1	20.8	24.2	-0.1
1992	53.7	22.1	23.2	1.1
1991	55.6	20.7	21.8	2.0
1990	57.1	20.2	20.9	1.8
1989	55.3	23.4	21.0	0.4
1988	56.1	22.3	20.8	0.8
1987	56.8	19.7	22.2	1.4
1986	56.9	19.4	22.9	0.8
1985	56.8	20.9	22.9	-0.6
1984	58.1	16.4	24.8	0.7
1983	61.7	15.1	23.3	0.0
1982	62.0	15.1	22.4	0.4
1981	62.4	15.7	22.4	-0.5
1980	61.7	15.6	22.9	-0.2
1979	59.4	17.5	23.4	-0.3
1978	60.8	18.1	21.4	-0.2
1977	64.7	14.8	20.6	0.0
1976	67.5	12.1	20.8	-0.3
1975	65.5	14.7	19.8	0.1
1974	66.4	13.9	19.6	0.1
Year	Consumption	Investment	Government	Net Exports
1973	65.6	15.6	18.3	0.4
1972	67.3	12.7	19.5	0.5
1971	65.8	15.0	18.8	0.4
1970	68.2	14.7	17.0	0.1
1969	71.2	10.2	16.3	2.3
1968	72.9	9.8	14.6	2.7

1967	73.4	9.3	14.4	2.9
1966	69.8	12.7	17.1	0.3
1965	71.2	11.0	16.2	1.6
1964	73.0	8.6	15.7	2.7
1963	73.8	7.8	14.8	3.7
1962	76.1	5.4	12.7	5.7
1961	72.6	9.3	15.5	2.7
1960	66.9	17.5	18.0	-2.5
1959	66.4	20.8	14.6	-1.7
1958	71.5	14.0	13.5	1.0
1957	74.0	9.7	13.9	2.4
1956	74.4	8.9	14.1	2.5
1955	75.6	8.3	14.3	1.7
1954	75.4	9.2	13.6	1.9
1953	75.4	8.2	15.1	1.4
1952	76.9	6.8	14.4	1.9



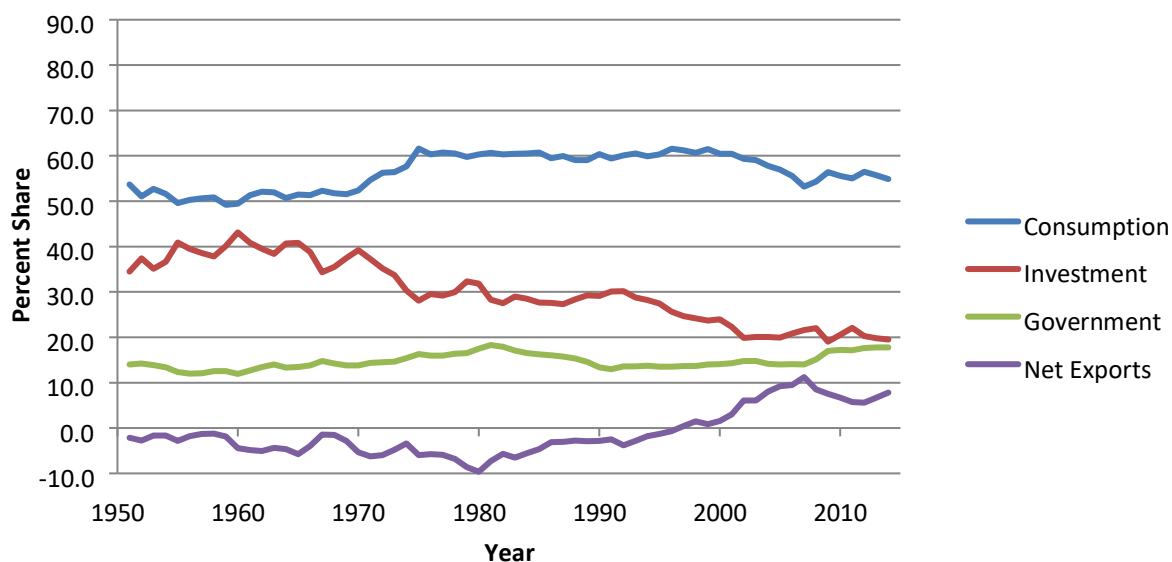
Source: Feenstra, Robert C. Robert Inklaar and Marcel P. Timmer (2015), 'The Next Generation of the Penn World Table' American Economic Review, 105(10), 3150-3182, available for download at www.ggdcd.net/pwt

Year	Consumption	Investment	Government	Net Exports
2014	59.9	21.8	20.9	-2.6
2013	60.3	21.2	20.8	-2.3
2012	59.3	21.5	20.4	-1.2
2011	58.1	20.9	20.3	0.7
2010	56.3	20.5	19.5	3.7
2009	57.1	20.9	19.8	2.2
2008	54.9	24.4	18.4	2.3
2007	53.5	24.5	17.5	4.5
2006	53.8	24.7	17.3	4.2
2005	53.9	24.8	17.2	4.1
2004	53.2	25.6	16.8	4.4
2003	53.8	25.7	16.9	3.6
2002	54.1	26.0	16.5	3.4
2001	53.2	28.0	16.1	2.7
2000	51.3	28.4	15.2	5.1
1999	52.5	28.4	14.8	4.3
1998	51.9	30.0	14.1	3.9
1997	51.6	32.4	13.5	2.5

Year	Consumption	Investment	Government	Net Exports
1996	52.2	33.2	13.2	1.4
1995	51.1	32.9	13.2	2.8
1994	50.6	32.6	13.0	3.8
1993	49.6	33.9	12.5	4.0
1992	49.7	34.4	12.3	3.6
1991	49.6	35.3	12.0	3.1
1990	51.1	34.8	12.2	1.9
1989	49.2	34.9	13.0	2.9
1988	49.0	33.8	13.2	4.0
1987	50.3	31.4	13.7	4.7
1986	50.1	30.3	13.7	5.9
1985	51.2	30.3	13.5	5.0
1984	51.5	30.3	14.3	3.8
1983	51.4	31.2	14.7	2.7
1982	50.0	34.0	14.6	1.4
1981	48.5	35.8	14.6	1.1
1980	48.5	37.2	14.5	-0.1
1979	49.6	38.3	14.4	-2.3

1978	48.8	37.5	14.4	-0.7
1977	49.2	36.3	14.5	0.0
1976	49.5	36.9	14.6	-1.0
1975	50.7	37.1	14.7	-2.5
1974	50.7	40.0	13.5	-4.1
1973	49.6	40.6	13.3	-3.5
1972	49.0	38.4	13.6	-1.0
1971	48.8	37.8	13.8	-0.4
1970	48.9	39.0	13.4	-1.3
1969	50.7	35.9	14.0	-0.6
1968	52.0	34.2	15.1	-1.3
1967	54.0	32.1	16.1	-2.2
1966	54.2	30.0	16.8	-1.0
1965	54.7	29.5	17.4	-1.5
1964	55.0	30.3	17.6	-2.9
1963	55.7	28.8	19.0	-3.5
1962	55.6	27.5	19.1	-2.2
1961	56.8	28.4	19.4	-4.6
1960	56.8	26.2	19.8	-2.8
1959	56.8	22.7	21.3	-0.8
1958	57.5	20.9	21.9	-0.2
1957	58.4	21.9	22.3	-2.7
1956	58.4	19.2	23.9	-1.5
1955	57.9	17.5	25.5	-1.0
1954	58.1	16.5	27.5	-2.1
Year	Consumption	Investment	Government	Net Exports
1953	58.5	15.5	28.1	-2.1
1952	54.3	16.8	28.8	0.1
1951	52.7	20.1	26.1	1.1
1950	53.0	14.1	31.8	1.1

Gross Domestic Product (GDP) Shares % GERMANY



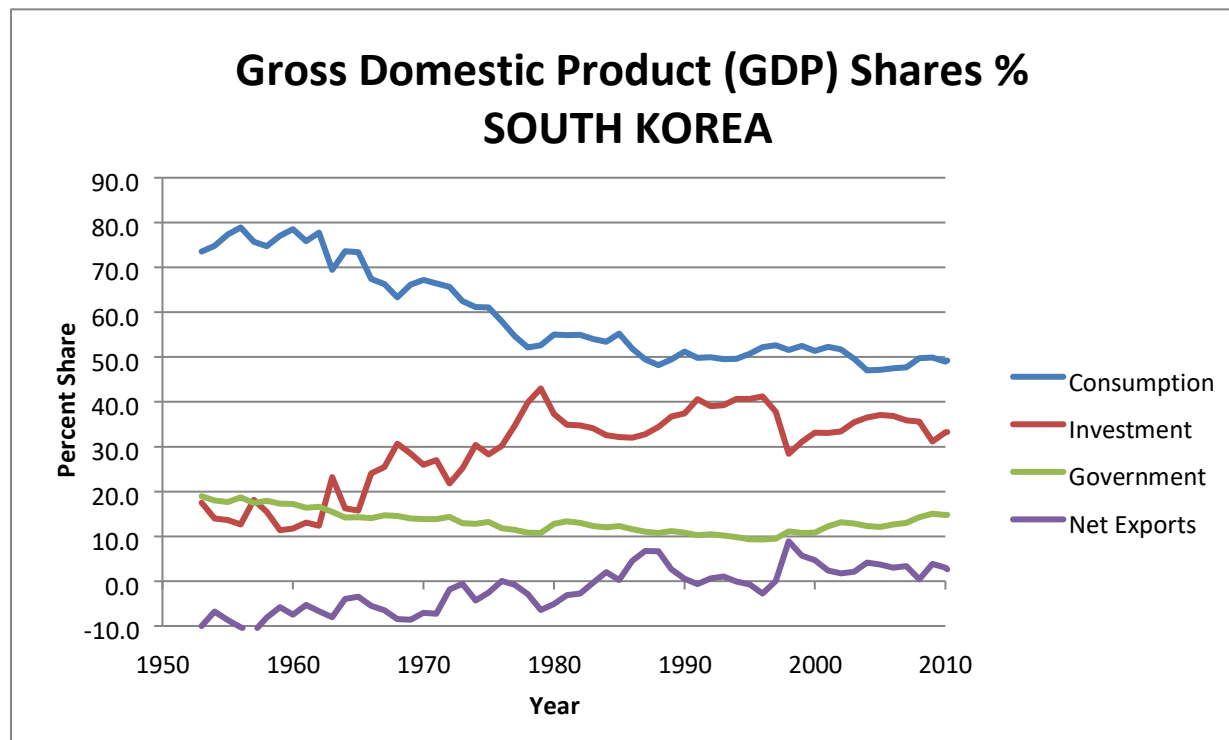
Source: Feenstra, Robert C. Robert Inklaar and Marcel P. Timmer (2015), 'The Next Generation of the Penn World Table' American Economic Review, 105(10), 3150-3182, available for download at www.ggdc.net/pwt

Year	Consumption	Investment	Government	Net Exports
2014	54.9	19.5	17.8	7.8
2013	55.7	19.8	17.7	6.7
2012	56.5	20.3	17.6	5.6
2011	55.0	22.1	17.2	5.7
2010	55.5	20.5	17.2	6.7
2009	56.4	19.0	17.0	7.5
2008	54.3	22.0	15.1	8.5
2007	53.2	21.6	14.0	11.2
2006	55.6	20.9	14.1	9.5

Year	Consumption	Investment	Government	Net Exports
2005	56.9	19.9	14.0	9.2
2004	57.8	20.1	14.1	8.0
2003	59.1	20.1	14.8	6.1

2002	59.3	19.9	14.8	6.1
2001	60.4	22.3	14.3	3.0
2000	60.4	23.9	14.1	1.6
1999	61.5	23.7	14.0	0.8
1998	60.7	24.2	13.7	1.5
1997	61.2	24.7	13.6	0.4
1996	61.6	25.6	13.5	-0.7
1995	60.3	27.5	13.5	-1.3
1994	59.9	28.2	13.7	-1.8
1993	60.5	28.8	13.6	-2.9
1992	60.1	30.1	13.6	-3.8
1991	59.4	30.1	13.0	-2.5
1990	60.4	29.1	13.4	-2.8
1989	59.1	29.3	14.6	-2.9
1988	59.1	28.3	15.4	-2.8
1987	60.0	27.3	15.8	-3.1
1986	59.5	27.6	16.1	-3.1
1985	60.7	27.7	16.2	-4.7
1984	60.5	28.5	16.5	-5.6
1983	60.5	29.0	17.1	-6.5
1982	60.3	27.5	17.9	-5.7
1981	60.7	28.3	18.3	-7.3
1980	60.3	31.9	17.5	-9.6
1979	59.7	32.3	16.5	-8.6
1978	60.5	30.0	16.4	-6.8
1977	60.7	29.2	15.9	-5.9
1976	60.3	29.5	15.9	-5.8
1975	61.6	28.1	16.3	-6.0
1974	57.7	30.3	15.4	-3.4
1973	56.4	33.7	14.6	-4.8
1972	56.3	35.2	14.5	-6.0
1971	54.7	37.2	14.3	-6.2
1970	52.4	39.2	13.8	-5.4
1969	51.5	37.4	13.8	-2.8
1968	51.7	35.5	14.2	-1.5
1967	52.3	34.4	14.8	-1.5
1966	51.3	38.8	13.8	-4.0

Year	Consumption	Investment	Government	Net Exports
1965	51.5	40.8	13.5	-5.8
1964	50.7	40.7	13.3	-4.6
1963	52.0	38.4	14.0	-4.4
1962	52.1	39.5	13.4	-5.1
1961	51.3	40.8	12.7	-4.9
1960	49.4	43.1	11.9	-4.5
1959	49.2	40.1	12.5	-1.8
1958	50.8	37.8	12.6	-1.2
1957	50.7	38.6	12.1	-1.3
1956	50.3	39.5	12.0	-1.8
1955	49.6	40.9	12.4	-2.8
1954	51.6	36.6	13.4	-1.6
1953	52.7	35.1	13.9	-1.6
1952	51.1	37.4	14.2	-2.8
1951	53.7	34.5	14.0	-2.1

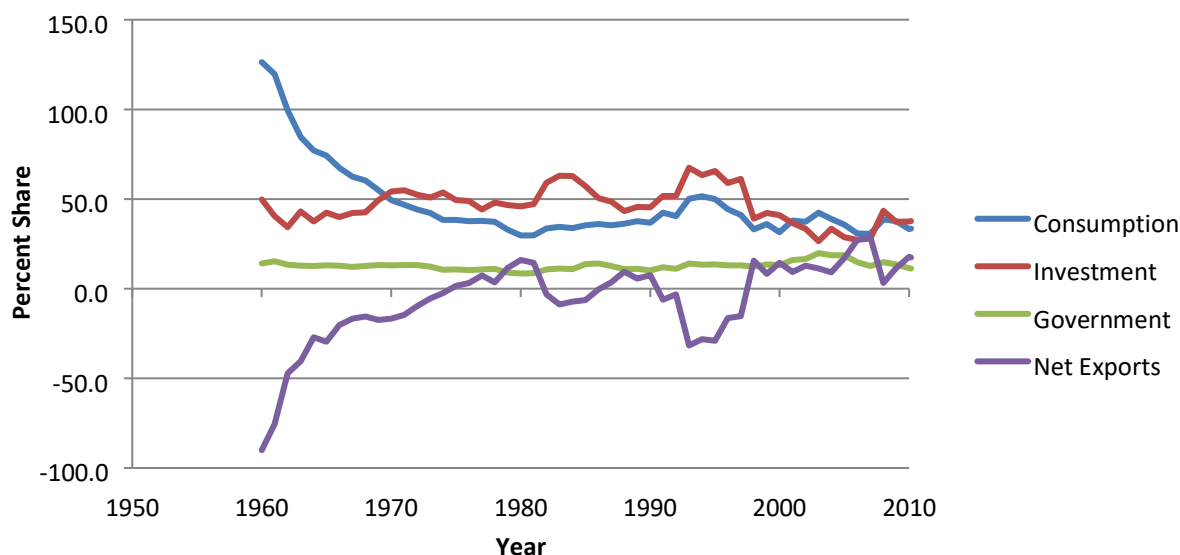


Source: Feenstra, Robert C. Robert Inklaar and Marcel P. Timmer (2015), 'The Next Generation of the Penn World Table' American Economic Review, 105(10), 3150-3182, available for download at www.ggdc.net/pwt

Year	Consumption	Investment	Government	Net Exports
2014	49.5	30.4	15.2	5.0
2013	50.5	30.4	15.4	3.7
2012	51.1	32.1	15.3	1.5
2011	50.7	33.7	15.1	0.5
2010	49.0	33.2	14.8	3.0
2009	49.9	31.2	15.1	3.8
2008	49.8	35.6	14.3	0.4
2007	47.7	35.9	13.0	3.4
2006	47.5	36.9	12.7	3.0
2005	47.1	37.1	12.1	3.7
2004	47.0	36.5	12.3	4.2
2003	49.6	35.4	12.8	2.1
2002	51.7	33.4	13.1	1.7
2001	52.3	33.1	12.3	2.4
2000	51.3	33.1	10.9	4.7
1999	52.5	31.1	10.7	5.7
1998	51.6	28.4	11.1	8.9
1997	52.7	37.8	9.5	0.0
1996	52.2	41.2	9.3	-2.7
1995	50.7	40.7	9.3	-0.7
1994	49.6	40.7	9.9	-0.1
1993	49.5	39.2	10.2	1.1
1992	49.9	39.0	10.4	0.6
1991	49.8	40.6	10.2	-0.7
1990	51.2	37.4	10.8	0.5
1989	49.4	36.7	11.2	2.6
1988	48.2	34.4	10.8	6.7
1987	49.4	32.8	11.0	6.7
1986	51.8	32.0	11.6	4.6
1985	55.2	32.2	12.3	0.3
1984	53.4	32.5	12.0	2.0
1983	54.0	34.1	12.3	-0.4
1982	55.0	34.8	13.0	-2.8
1981	54.9	34.9	13.3	-3.1
1980	55.0	37.3	12.8	-5.1
1979	52.6	43.0	10.8	-6.4
1978	52.2	39.9	10.8	-2.9

1977	54.6	34.7	11.5	-0.8
1976	58.0	30.2	11.8	0.0
1975	61.1	28.2	13.2	-2.5
1974	61.2	30.4	12.8	-4.3
1973	62.5	25.1	12.9	-0.6
1972	65.6	21.8	14.4	-1.8
Year	Consumption	Investment	Government	Net Exports
1971	66.4	27.0	13.8	-7.2
1970	67.2	26.0	13.9	-7.1
1969	66.1	28.5	14.0	-8.6
1968	63.3	30.6	14.5	-8.5
1967	66.3	25.5	14.7	-6.5
1966	67.4	24.0	14.0	-5.5
1965	73.4	15.8	14.3	-3.5
1964	73.6	16.2	14.2	-4.0
1963	69.4	23.2	15.4	-8.1
1962	77.8	12.3	16.6	-6.7
1961	75.9	13.1	16.4	-5.3
1960	78.6	11.7	17.2	-7.5
1959	77.1	11.4	17.3	-5.8
1958	74.7	15.4	17.9	-8.1
1957	75.7	18.1	17.4	-11.3
1956	78.9	12.7	18.7	-10.3
1955	77.4	13.7	17.6	-8.7
1954	74.8	14.0	18.0	-6.8
1953	73.5	17.5	19.0	-10.0

Gross Domestic Product (GDP) Share % SINGAPORE

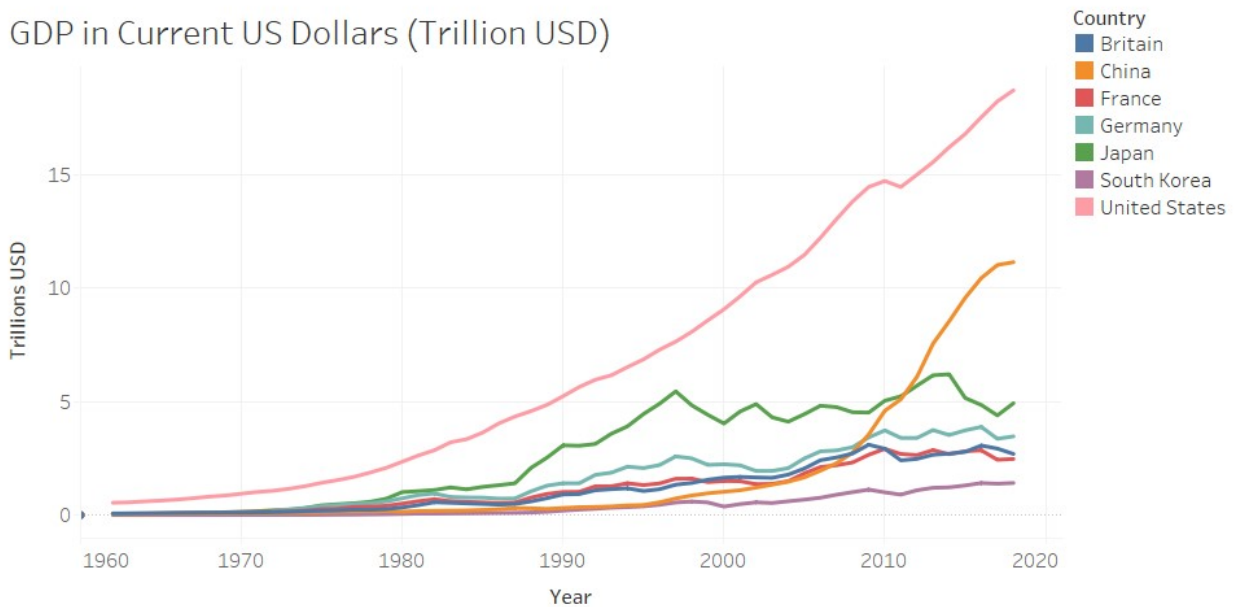


Source: Feenstra, Robert C. Robert Inklaar and Marcel P. Timmer (2015), 'The Next Generation of the Penn World Table' American Economic Review, 105(10), 3150-3182, available for download at www.ggdc.net/pwt

Year	Consumption	Investment	Government	Net Exports
2014	34.0	36.6	10.0	19.4
2013	36.4	41.6	11.1	10.9
2012	35.6	43.3	10.0	11.1
2011	35.0	39.3	10.3	15.4
2010	33.3	37.5	11.5	17.7
2009	37.7	37.3	13.6	11.4
2008	38.7	43.4	14.7	3.2
2007	30.6	28.0	12.6	28.9
2006	30.8	27.2	14.7	27.2
2005	35.7	28.6	18.6	17.1
2004	38.9	33.4	18.6	9.2
2003	42.4	26.5	19.8	11.3
2002	37.4	33.4	16.5	12.8
2001	38.0	36.6	16.1	9.3
2000	31.5	41.0	13.2	14.4
1999	36.0	42.2	13.6	8.2
1998	33.1	39.0	12.3	15.6

1997	41.1	61.2	13.0	-15.4
1996	44.4	58.9	13.1	-16.3
1995	50.0	65.6	13.6	-29.1
1994	51.5	63.3	13.4	-28.1
1993	50.1	67.5	14.1	-31.6
1992	40.4	51.7	11.1	-3.2
1991	42.5	51.8	11.9	-6.2
1990	36.8	45.5	10.2	7.6
1989	37.7	45.6	11.0	5.7
1988	36.2	43.3	10.9	9.6
1987	35.4	48.5	12.6	3.5
1986	36.0	50.4	14.0	-0.4
1985	35.4	57.2	13.7	-6.3
1984	33.7	62.8	10.8	-7.3
1983	34.5	63.0	11.2	-8.8
1982	33.5	59.1	10.6	-3.3
1981	29.8	47.1	8.6	14.4
1980	29.7	45.9	8.5	15.9
1979	32.9	46.5	9.0	11.6
1978	37.3	48.1	11.0	3.5
1977	37.8	44.1	10.7	7.4
1976	37.6	48.9	10.4	3.1
1975	38.3	49.4	10.7	1.6
Year	Consumption	Investment	Government	Net Exports
1974	38.3	53.7	10.6	-2.5
1973	42.3	50.9	12.4	-5.6
1972	44.1	52.4	13.2	-9.6
1971	46.7	54.8	13.1	-14.7
1970	49.4	54.2	13.1	-16.7
1969	55.1	49.2	13.3	-17.5
1968	60.3	42.6	12.6	-15.6
1967	62.4	42.1	12.1	-16.7
1966	67.4	40.0	12.8	-20.3
1965	74.2	42.3	13.0	-29.5
1964	77.0	37.5	12.6	-27.1
1963	84.6	43.1	12.8	-40.5
1962	99.4	34.3	13.4	-47.1
1961	119.7	40.5	15.2	-75.4
1960	126.4	49.7	14.0	-90.1

GDP in Current US Dollars (Trillion USD)



Source: World Development Indicators, World Bank

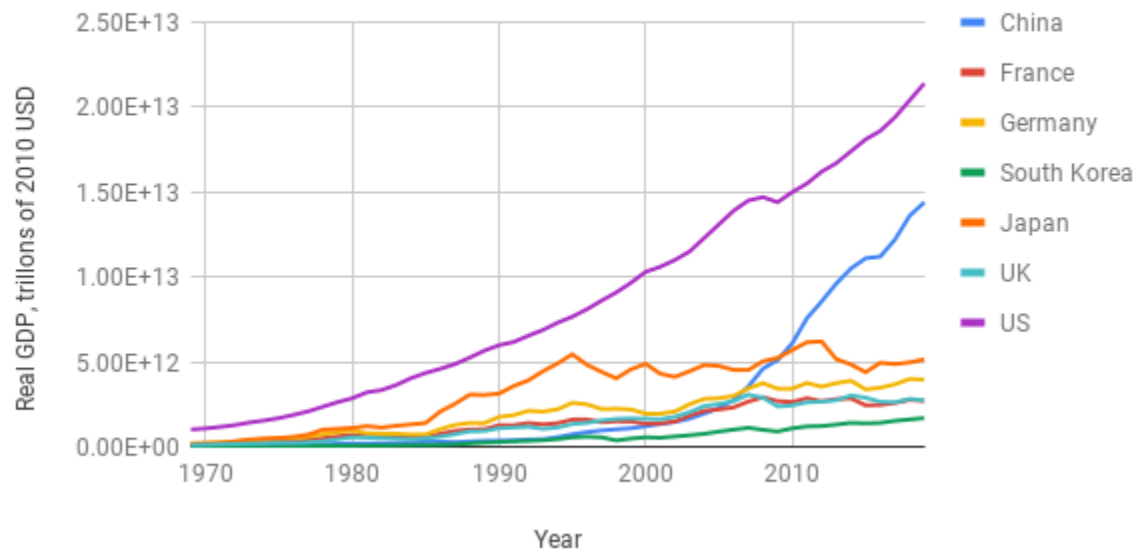
GDP (Gross Domestic Product) (Trillions of Current US \$) Table:

	China	France	Germany	United States	Britain	South Korea	Japan
2018	13.61	2.78	3.95	20.54	2.86	1.62	4.97
2017	12.14	2.59	3.66	19.49	2.67	1.53	4.86
2016	11.14	2.47	3.47	18.71	2.69	1.41	4.93
2015	11.02	2.44	3.36	18.22	2.93	1.38	4.39
2014	10.44	2.85	3.88	17.52	3.06	1.41	4.85
2013	9.57	2.81	3.73	16.78	2.79	1.31	5.16
2012	8.53	2.68	3.53	16.2	2.7	1.22	6.2
2011	7.55	2.86	3.74	15.54	2.66	1.2	6.16
2010	6.09	2.64	3.4	14.99	2.48	1.09	5.7
2009	5.1	2.69	3.4	14.45	2.41	0.9	5.23
2008	4.59	2.92	3.73	14.71	2.92	1	5.04

2007	3.55	2.66	3.42	14.45	3.1	1.12	4.52
2006	2.75	2.32	2.99	13.81	2.71	1.01	4.53
2005	2.29	2.2	2.85	13.04	2.54	0.9	4.76
2004	1.96	2.12	2.81	12.21	2.42	0.76	4.82
2003	1.66	1.84	2.5	11.46	2.05	0.68	4.45
2002	1.47	1.49	2.07	10.94	1.78	0.61	4.12
2001	1.34	1.38	1.94	10.58	1.64	0.53	4.3
2000	1.21	1.36	1.94	10.25	1.66	0.56	4.89
1999	1.09	1.49	2.19	9.63	1.68	0.49	4.56
1998	1.03	1.5	2.24	9.06	1.65	0.37	4.03
1997	0.96	1.45	2.21	8.58	1.56	0.56	4.41
1996	0.86	1.61	2.5	8.07	1.42	0.6	4.83
1995	0.73	1.6	2.59	7.64	1.34	0.56	5.45
1994	0.56	1.39	2.21	7.29	1.14	0.46	4.91
1993	0.44	1.32	2.07	6.86	1.06	0.39	4.45
1992	0.43	1.4	2.13	6.52	1.18	0.35	3.91
1991	0.38	1.27	1.87	6.16	1.14	0.33	3.58
1990	0.36	1.27	1.77	5.96	1.09	0.28	3.13
1989	0.35	1.03	1.4	5.64	0.93	0.24	3.05
1988	0.31	1.02	1.4	5.24	0.91	0.2	3.07
1987	0.27	0.93	1.3	4.86	0.75	0.15	2.53
1986	0.3	0.77	1.05	4.58	0.6	0.12	2.08
1985	0.31	0.55	0.73	4.34	0.49	0.1	1.4
1984	0.26	0.53	0.73	4.04	0.46	0.1	1.32
1983	0.23	0.56	0.77	3.63	0.49	0.09	1.24
1982	0.21	0.58	0.78	3.34	0.52	0.08	1.13
1981	0.2	0.62	0.8	3.21	0.54	0.07	1.22
1980	0.19	0.7	0.95	2.86	0.56	0.06	1.11
1979	0.18	0.61	0.88	2.63	0.44	0.07	1.06

1978	0.15	0.51	0.74	2.35	0.34	0.05	1.01
1977	0.17	0.41	0.6	2.08	0.26	0.04	0.72
1976	0.15	0.37	0.52	1.87	0.23	0.03	0.59
1975	0.16	0.36	0.49	1.68	0.24	0.02	0.52
1974	0.14	0.29	0.45	1.55	0.21	0.02	0.48
1973	0.14	0.26	0.4	1.43	0.19	0.01	0.43
1972	0.11	0.2	0.3	1.28	0.17	0.01	0.32
1971	0.1	0.17	0.25	1.16	0.15	0.01	0.24
1970	0.09	0.15	0.22	1.07	0.13	0.01	0.21
1969	0.08	0.14	-	1.02	0.12	0.01	0.17
1968	0.07	0.13	-	0.94	0.11	0.01	0.15
1967	0.07	0.12	-	0.86	0.11	0	0.12
1966	0.08	0.11	-	0.82	0.11	0	0.11
1965	0.07	0.1	-	0.74	0.1	0	0.09
1964	0.06	0.09	-	0.69	0.09	0	0.08
1963	0.05	0.08	-	0.64	0.09	0	0.07
1962	0.05	0.08	-	0.61	0.08	0	0.06
1961	0.05	0.07	-	0.56	0.08	0	0.05
1960	0.06	0.06	-	0.54	0.07	0	0.04

Real GDP (Gross Domestic Product)(Trillion of 2010 US Dollars)



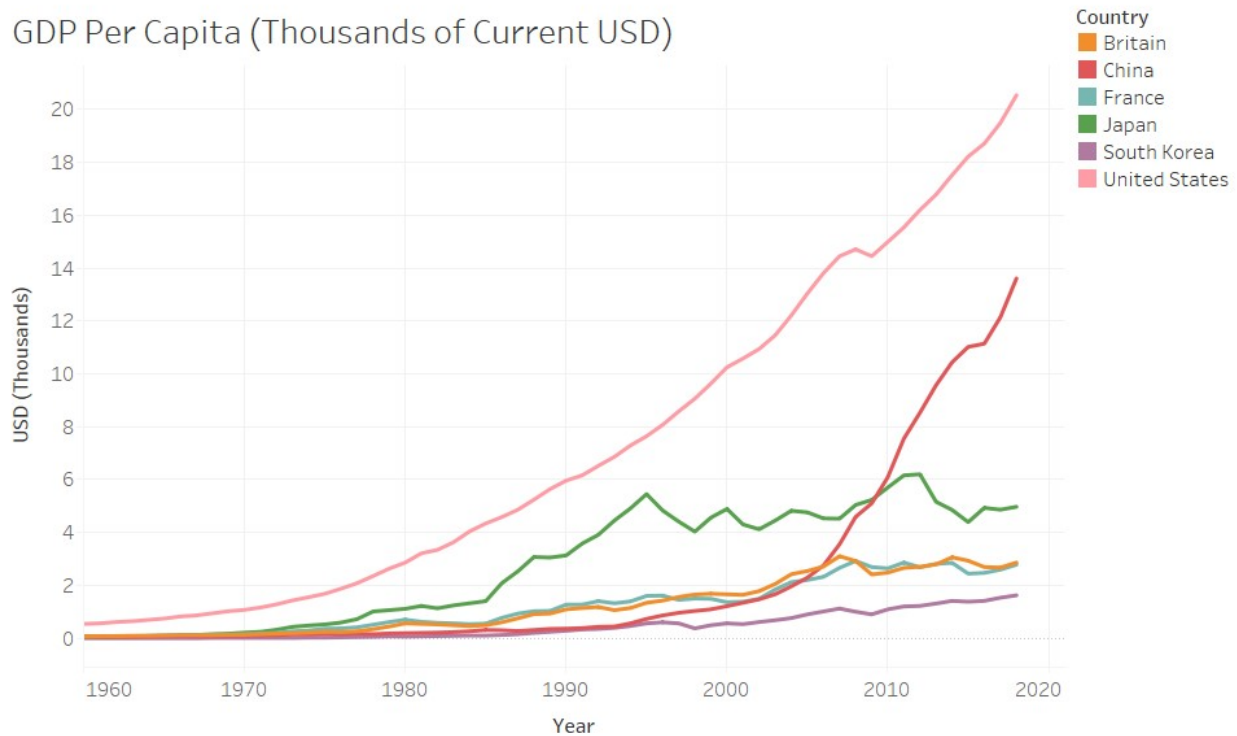
Source: World Development Indicators, World Bank

Year	United States	China	Japan	Germany	South Korea	Singapore
1960	3.1	0.1	0.8		0.0	0.0
1961	3.1	0.1	0.9		0.0	0.0
1962	3.3	0.1	1.0		0.0	0.0
1963	3.5	0.1	1.1		0.0	0.0
1964	3.7	0.1	1.2		0.0	0.0
1965	3.9	0.1	1.2		0.0	0.0
1966	4.2	0.1	1.4		0.0	0.0
1967	4.3	0.1	1.5		0.0	0.0
1968	4.5	0.1	1.7		0.0	0.0
1969	4.6	0.2	1.9		0.1	0.0
1970	4.8	0.2	1.9	1.5	0.1	0.0
1971	4.9	0.2	2.0	1.6	0.1	0.0
1972	5.2	0.2	2.2	1.7	0.1	0.0
1973	5.5	0.2	2.4	1.7	0.1	0.0
1974	5.5	0.2	2.3	1.7	0.1	0.0
1975	5.5	0.2	2.4	1.7	0.1	0.0
1976	5.7	0.2	2.5	1.8	0.1	0.0

1977	6.0	0.3	2.6	1.9	0.1	0.0
1978	6.3	0.3	2.7	1.9	0.1	0.0
1979	6.5	0.3	2.9	2.0	0.2	0.0
1980	6.5	0.3	3.0	2.0	0.1	0.0
1981	6.7	0.4	3.1	2.1	0.2	0.0
1982	6.6	0.4	3.2	2.0	0.2	0.0
1983	6.9	0.4	3.3	2.1	0.2	0.0
1984	7.4	0.5	3.5	2.1	0.2	0.0
1985	7.7	0.6	3.7	2.2	0.2	0.0
1986	8.0	0.6	3.8	2.2	0.3	0.0
1987	8.2	0.7	3.9	2.3	0.3	0.1
1988	8.6	0.8	4.2	2.3	0.3	0.1
1989	8.9	0.8	4.4	2.4	0.3	0.1
1990	9.1	0.8	4.7	2.6	0.4	0.1
1991	9.1	0.9	4.8	2.7	0.4	0.1
1992	9.4	1.0	4.9	2.8	0.4	0.1
1993	9.6	1.2	4.9	2.7	0.5	0.1
1994	10.0	1.3	4.9	2.8	0.5	0.1
1995	10.3	1.5	5.1	2.8	0.6	0.1
1996	10.7	1.6	5.2	2.9	0.6	0.1
1997	11.2	1.8	5.3	2.9	0.6	0.1
1998	11.7	1.9	5.2	3.0	0.6	0.1
1999	12.2	2.1	5.2	3.0	0.7	0.1
2000	12.7	2.2	5.3	3.1	0.7	0.1
2001	12.8	2.4	5.4	3.2	0.7	0.1
Year	United States	China	Japan	Germany	South Korea	Singapore
2002	13.1	2.6	5.4	3.2	0.8	0.1
2003	13.4	2.9	5.5	3.2	0.8	0.1
2004	13.9	3.2	5.6	3.2	0.9	0.2
2005	14.4	3.6	5.7	3.2	0.9	0.2
2006	14.8	4.0	5.8	3.3	0.9	0.2
2007	15.1	4.6	5.8	3.4	1.0	0.2
2008	15.0	5.0	5.8	3.5	1.0	0.2
2009	14.6	5.5	5.5	3.3	1.0	0.2
2010	15.0	6.1	5.7	3.4	1.1	0.2
2011	15.2	6.7	5.7	3.5	1.1	0.3
2012	15.5	7.2	5.8	3.6	1.2	0.3
2013	15.8	7.8	5.9	3.6	1.2	0.3
2014	16.2	8.3	5.9	3.6	1.2	0.3
2015	16.6	8.9	6.0	3.7	1.3	0.3
2016	17.0	9.5	6.0	3.8	1.3	0.3
2017	17.3	10.1	6.1	3.9	1.3	0.3

2018	17.8	10.8	6.2	3.9	1.4	0.3
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GDP Per Capita (Thousands of Current USD)



Source: World Development Indicators, World Bank

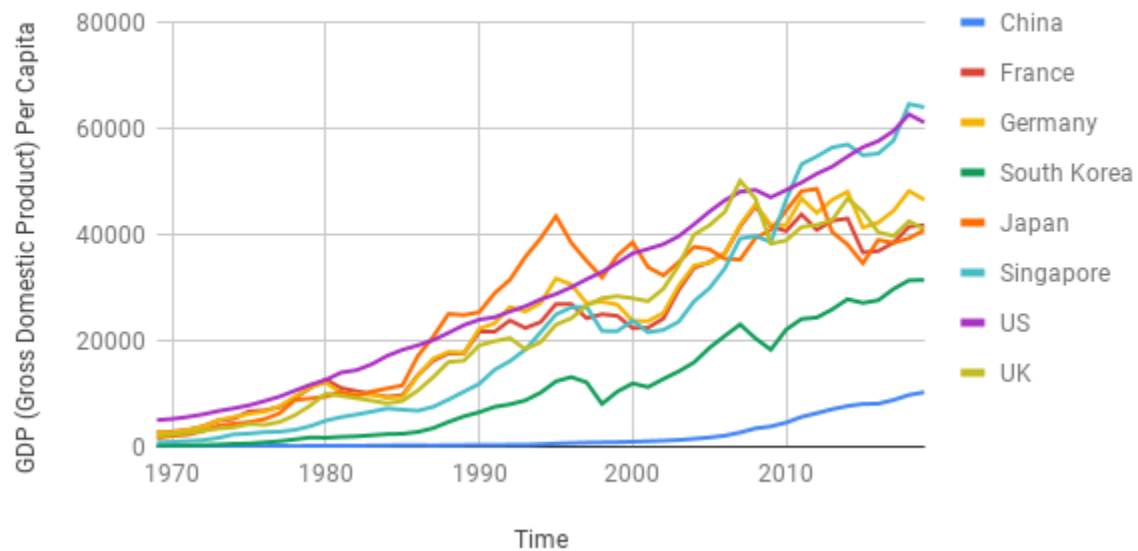
GDP Per Capita (Current \$)

	China	France	Germany	United States	Britain	South Korea	Japan
2018	9.77	41.47	47.62	62.89	42.96	31.38	39.29
2017	8.76	38.68	44.24	59.96	40.36	29.8	38.33
2016	8.08	37.04	42.1	57.93	41.06	27.62	38.79
2015	8.03	36.64	41.14	56.82	44.97	27.11	34.52
2014	7.65	43.01	47.96	55.05	47.43	27.81	38.11
2013	7.05	42.59	46.29	53.12	43.44	25.89	40.45
2012	6.32	40.87	43.86	51.61	42.46	24.36	48.6
2011	5.62	43.79	46.64	49.89	42.04	24.08	48.17
2010	4.55	40.64	41.53	48.47	39.44	22.09	44.51

2009	3.83	41.58	41.49	47.1	38.71	18.29	40.86
2008	3.47	45.33	45.43	48.38	47.29	20.43	39.34
2007	2.69	41.51	41.59	47.98	50.57	23.06	35.28
2006	2.1	36.44	36.32	46.3	44.6	20.89	35.43
2005	1.75	34.76	34.51	44.11	42.03	18.64	37.22
2004	1.51	33.74	34.04	41.71	40.29	15.91	37.69
2003	1.29	29.57	30.24	39.5	34.42	14.21	34.81
2002	1.15	24.18	25.08	38.02	30.06	12.78	32.29
2001	1.05	22.43	23.61	37.13	27.74	11.25	33.85
2000	0.96	22.36	23.64	36.33	28.15	11.95	38.53
1999	0.87	24.67	26.73	34.51	28.67	10.41	36.03
1998	0.83	24.97	27.29	32.85	28.21	8.09	31.9
1997	0.78	24.23	26.96	31.46	26.73	12.13	35.02
1996	0.71	26.87	30.49	29.97	24.33	13.14	38.44
1995	0.61	26.89	31.66	28.69	23.12	12.33	43.44
1994	0.47	23.5	27.08	27.69	19.71	10.21	39.27
1993	0.38	22.38	25.52	26.39	18.39	8.74	35.77
1992	0.37	23.81	26.44	25.42	20.49	8	31.46
1991	0.33	21.68	23.36	24.34	19.9	7.52	28.93
1990	0.32	21.79	22.3	23.89	19.1	6.52	25.36
1989	0.31	17.69	17.76	22.86	16.24	5.74	24.81
1988	0.28	17.68	17.93	21.42	15.99	4.69	25.05
1987	0.25	16.3	16.68	20.04	13.12	3.51	20.75
1986	0.28	13.54	13.46	19.07	10.61	2.8	17.11
1985	0.29	9.76	9.43	18.24	8.65	2.46	11.58
1984	0.25	9.42	9.31	17.12	8.18	2.39	10.98
1983	0.23	9.99	9.86	15.54	8.69	2.18	10.43
1982	0.2	10.5	9.91	14.43	9.15	1.98	9.58
1981	0.2	11.1	10.21	13.98	9.6	1.87	10.36

1980	0.19	12.71	12.14	12.57	10.03	1.7	9.47
1979	0.18	11.18	11.28	11.67	7.8	1.77	9.11
1978	0.16	9.26	9.48	10.56	5.98	1.4	8.82
1977	0.19	7.53	7.68	9.45	4.68	1.05	6.34
1976	0.17	6.87	6.63	8.59	4.14	0.83	5.2
1975	0.18	6.69	6.24	7.8	4.3	0.62	4.66
1974	0.16	5.33	5.64	7.23	3.67	0.56	4.35
1973	0.16	4.97	5.05	6.73	3.43	0.41	4
1972	0.13	3.85	3.81	6.09	3.03	0.32	2.97
1971	0.12	3.17	3.19	5.61	2.65	0.3	2.27
1970	0.11	2.86	2.76	5.23	2.35	0.28	2.04
1969	0.1	2.75	-	5.03	2.1	0.24	1.67
1968	0.09	2.54	-	4.7	1.95	0.2	1.45
1967	0.1	2.34	-	4.34	2.06	0.16	1.23
1966	0.1	2.19	-	4.15	1.99	0.13	1.06
1965	0.1	2.04	-	3.83	1.87	0.11	0.92
1964	0.09	1.91	-	3.57	1.75	0.12	0.84
1963	0.07	1.74	-	3.37	1.61	0.15	0.72
1962	0.07	1.58	-	3.24	1.53	0.11	0.63
1961	0.08	1.43	-	3.07	1.47	0.09	0.56
1960	0.09	1.33	-	3.01	1.4	0.16	0.48

GDP (Gross Domestic Product) Per Capita (Thousands of 2010 US Dollars)



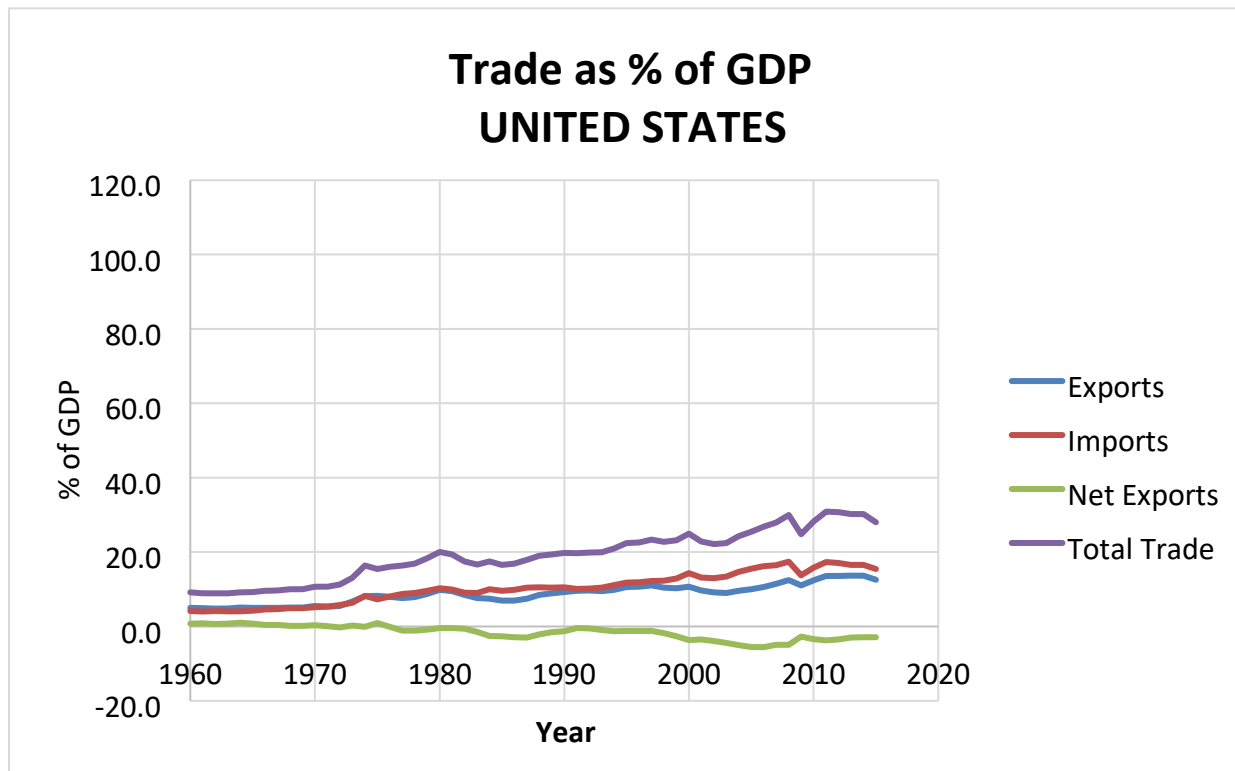
Source: World Development Indicators, World Bank

Year	United States	China	Japan	Germany	South Korea	Singapore
2018	54	8	49	47	27	58
2017	53	7	48	47	26	57
2016	52	7	47	46	25	55
2015	52	6	47	45	25	52
2014	51	6	47	45	24	51
2013	50	6	46	44	24	50
2012	49	5	45	44	23	49

Year	United States	China	Japan	Germany	South Korea	Singapore
2011	49	5	45	44	23	48
2010	48	5	45	42	22	47
2009	48	4	43	40	21	41
2008	49	4	45	42	21	43
2007	50	3	46	42	20	44
2006	50	3	45	40	19	42
2005	49	3	44	39	19	40

2004	48	2	44	39	18	38
2003	46	2	43	38	17	35
2002	45	2	42	39	17	33
2001	45	2	42	39	16	32
2000	45	2	42	38	15	33
1999	44	2	41	37	14	31
1998	42	2	41	36	13	30
1997	41	1	42	36	14	31
1996	40	1	42	35	13	30
1995	39	1	40	35	12	29
1994	38	1	39	34	11	28
1993	37	1	39	34	11	26
1992	37	1	39	34	10	24
1991	36	1	39	34	10	23
1990	36	1	38	32	9	22
1989	36	1	36	31	8	21
1988	35	1	34	30	8	20
1987	34	1	32	29	7	18
1986	33	1	31	29	6	17
1985	32	1	30	28	6	16
1984	31	0	29	27	5	16
1983	29	0	28	27	5	15
1982	28	0	27	26	4	14
1981	29	0	26	26	4	14
1980	29	0	25	26	4	13
1979	29	0	25	26	4	12
1978	29	0	24	25	4	11
1977	27	0	23	24	3	11
1976	26	0	22	23	3	10
1975	25	0	21	22	3	9
1974	26	0	21	22	3	9
1973	26	0	22	22	3	9
Year	United States	China	Japan	Germany	South Korea	Singapore
1972	25	0	20	21	2	8
1971	24	0	19	20	2	7
1970	23	0	18	20	2	7

1969	23	0	19	2	6
1968	22	0	17	2	5
1967	22	0	15	1	5
1966	21	0	14	1	4
1965	20	0	13	1	4
1964	19	0	12	1	4
1963	18	0	11	1	4
1962	18	0	10	1	4
1961	17	0	9	1	4
1960	17	0	9	1	3

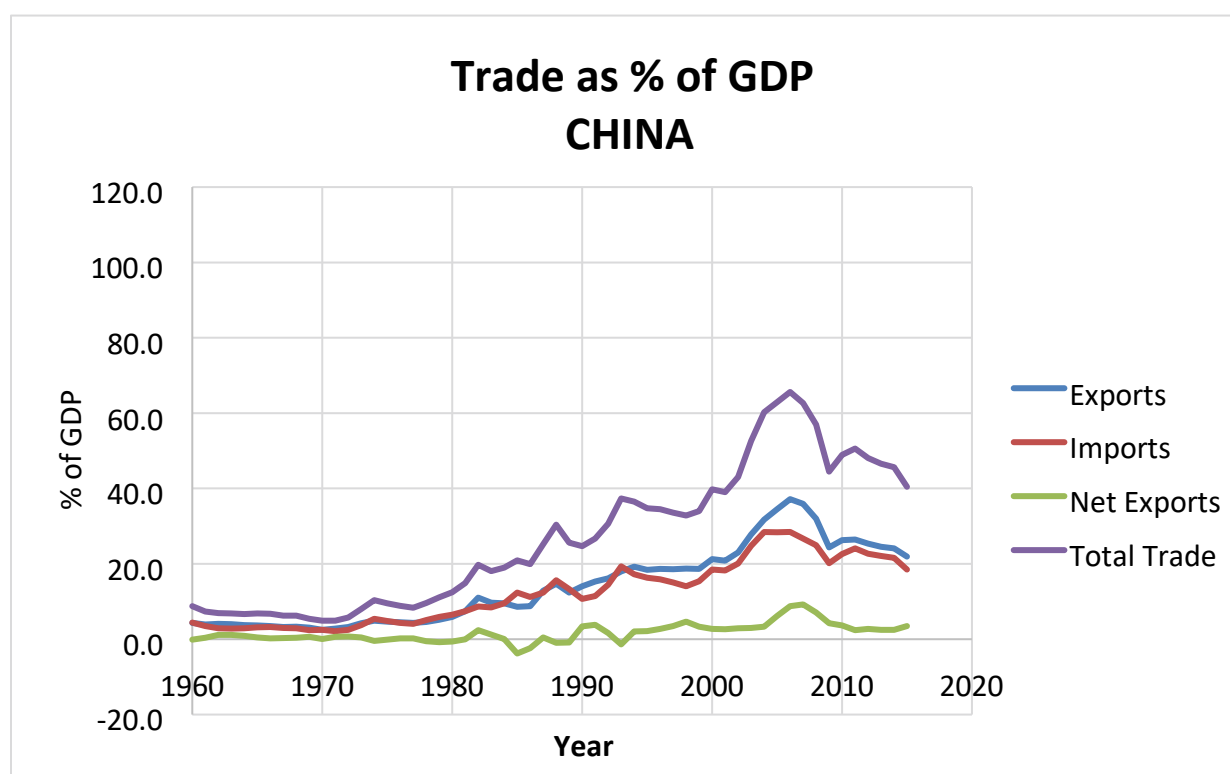


Source: World Development Index, World Bank

Year	Exports	Imports	Net Exports	Total Trade
2018	12.2	15.8	-3.6	28
2017	12.1	14.9	-2.8	27
2016	11.9	15.1	-3.2	27
2015	12.6	15.4	-2.9	28
2014	13.7	16.6	-2.9	30
2013	13.6	16.6	-2.9	30
2012	13.6	17.1	-3.5	31
2011	13.6	17.3	-3.7	31
2010	12.4	15.8	-3.4	28
2009	11.0	13.8	-2.7	25
2008	12.5	17.4	-4.9	30
2007	11.5	16.5	-5.0	28
2006	10.7	16.2	-5.6	27
2005	10.0	15.5	-5.5	26
2004	9.6	14.7	-5.0	24
2003	9.0	13.4	-4.4	22

2002	9.1	13.0	-3.9	22
2001	9.7	13.1	-3.5	23
2000	10.7	14.3	-3.7	25
1999	10.3	12.9	-2.7	23
1998	10.5	12.3	-1.8	23
1997	11.1	12.3	-1.2	23
1996	10.7	11.9	-1.2	23
Year	Exports	Imports	Net Exports	Total Trade
1995	10.6	11.8	-1.2	22
1994	9.9	11.1	-1.3	21
1993	9.5	10.5	-0.9	20
1992	9.7	10.2	-0.5	20
1991	9.6	10.1	-0.5	20
1990	9.2	10.5	-1.3	20
1989	8.9	10.4	-1.5	19
1988	8.5	10.5	-2.1	19
1987	7.5	10.4	-3.0	18
1986	7.0	9.9	-2.9	17
1985	7.0	9.6	-2.6	17
1984	7.5	10.0	-2.5	18
1983	7.6	9.0	-1.4	17
1982	8.5	9.1	-0.6	18
1981	9.5	9.9	-0.4	19
1980	9.8	10.3	-0.5	20
1979	8.7	9.6	-0.9	18
1978	7.9	9.0	-1.1	17
1977	7.6	8.7	-1.1	16
1976	8.0	8.1	-0.1	16
1975	8.2	7.3	0.9	15
1974	8.2	8.2	-0.1	16
1973	6.7	6.4	0.3	13
1972	5.5	5.8	-0.3	11
1971	5.4	5.3	0.1	11
1970	5.5	5.2	0.4	11
1969	5.1	5.0	0.1	10

1968	5.1	4.9	0.1	10
1967	5.0	4.6	0.4	10
1966	5.0	4.6	0.5	10
1965	5.0	4.2	0.8	9
1964	5.1	4.1	1.0	9
1963	4.9	4.1	0.8	9
1962	4.8	4.1	0.7	9
1961	4.9	4.0	0.9	9
1960	5.0	4.2	0.8	9

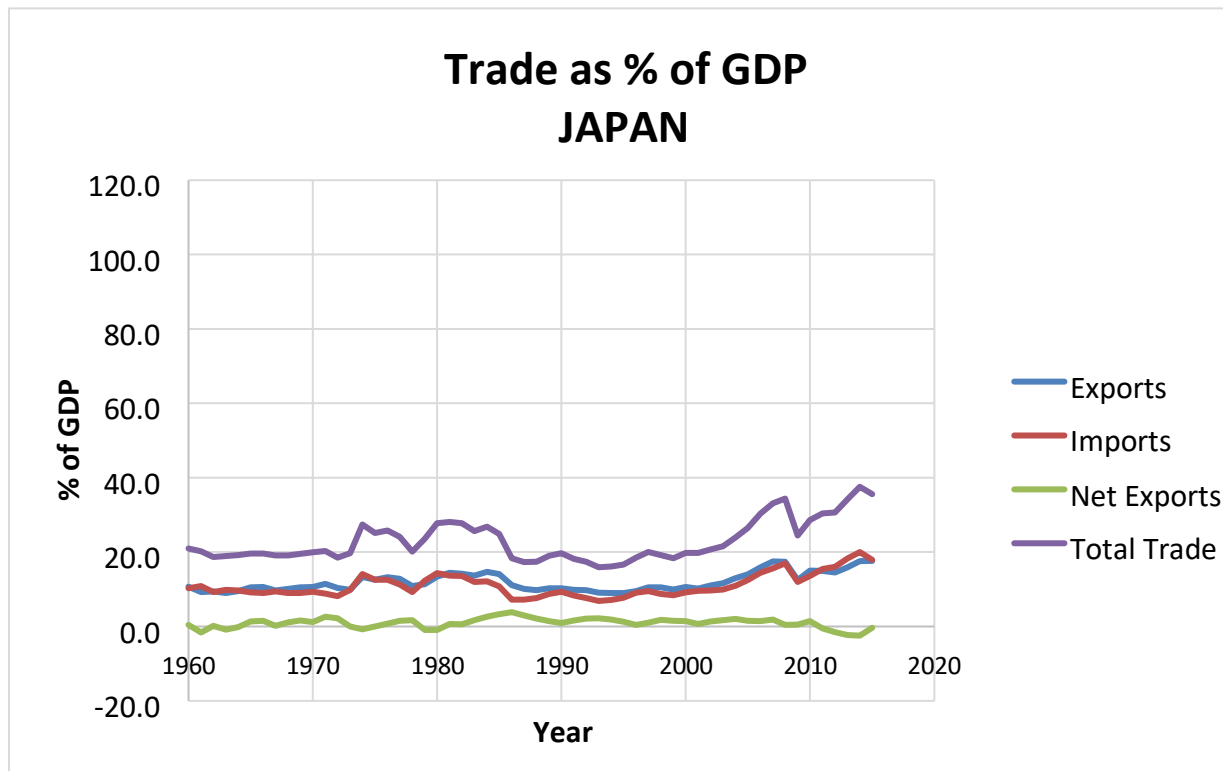


Source: World Development Index, World Bank

Year	Exports	Imports	Net Exports	Total Trade
2018	19.5	18.5	1.0	38
2017	20.0	18.0	2.0	38
2016	19.8	17.2	2.6	37
2015	22.0	18.5	3.5	40
2014	24.1	21.6	2.5	46

2013	24.5	22.1	2.4	47
2012	25.4	22.7	2.7	48
2011	26.5	24.1	2.4	51
2010	26.3	22.6	3.6	49
2009	24.4	20.1	4.2	45
2008	32.0	24.9	7.1	57
2007	35.9	26.7	9.2	63
2006	37.2	28.4	8.7	66
2005	34.5	28.4	6.1	63
2004	31.8	28.4	3.3	60
2003	27.8	24.8	3.0	53
2002	23.0	20.1	2.9	43
2001	20.8	18.2	2.6	39
2000	21.2	18.5	2.7	40
1999	18.7	15.4	3.3	34
1998	18.8	14.1	4.7	33
1997	18.5	15.0	3.5	34
1996	18.6	15.9	2.8	35
Year	Exports	Imports	Net Exports	Total Trade
1995	18.4	16.3	2.1	35
1994	19.3	17.2	2.1	37
1993	18.0	19.4	-1.4	37
1992	16.1	14.5	1.6	31
1991	15.3	11.5	3.8	27
1990	14.0	10.7	3.4	25
1989	12.4	13.3	-0.9	26
1988	14.7	15.7	-0.9	30
1987	12.9	12.4	0.5	25
1986	8.8	11.2	-2.4	20
1985	8.6	12.4	-3.8	21
1984	9.5	9.5	0.0	19
1983	9.7	8.4	1.3	18
1982	11.1	8.7	2.4	20
1981	7.4	7.4	0.0	15
1980	5.9	6.5	-0.6	12

1979	5.2	5.9	-0.8	11
1978	4.6	5.1	-0.5	10
1977	4.3	4.1	0.2	8
1976	4.5	4.3	0.2	9
1975	4.7	4.8	-0.1	10
1974	4.9	5.4	-0.5	10
1973	4.2	3.8	0.5	8
1972	3.2	2.5	0.7	6
1971	2.8	2.1	0.7	5
1970	2.5	2.5	0.0	5
1969	3.0	2.4	0.6	5
1968	3.3	2.9	0.4	6
1967	3.3	3.0	0.3	6
1966	3.5	3.2	0.3	7
1965	3.6	3.2	0.4	7
1964	3.8	2.9	0.9	7
1963	4.0	2.9	1.1	7
1962	4.1	2.9	1.1	7
1961	3.9	3.5	0.4	7
1960	4.3	4.4	-0.1	9

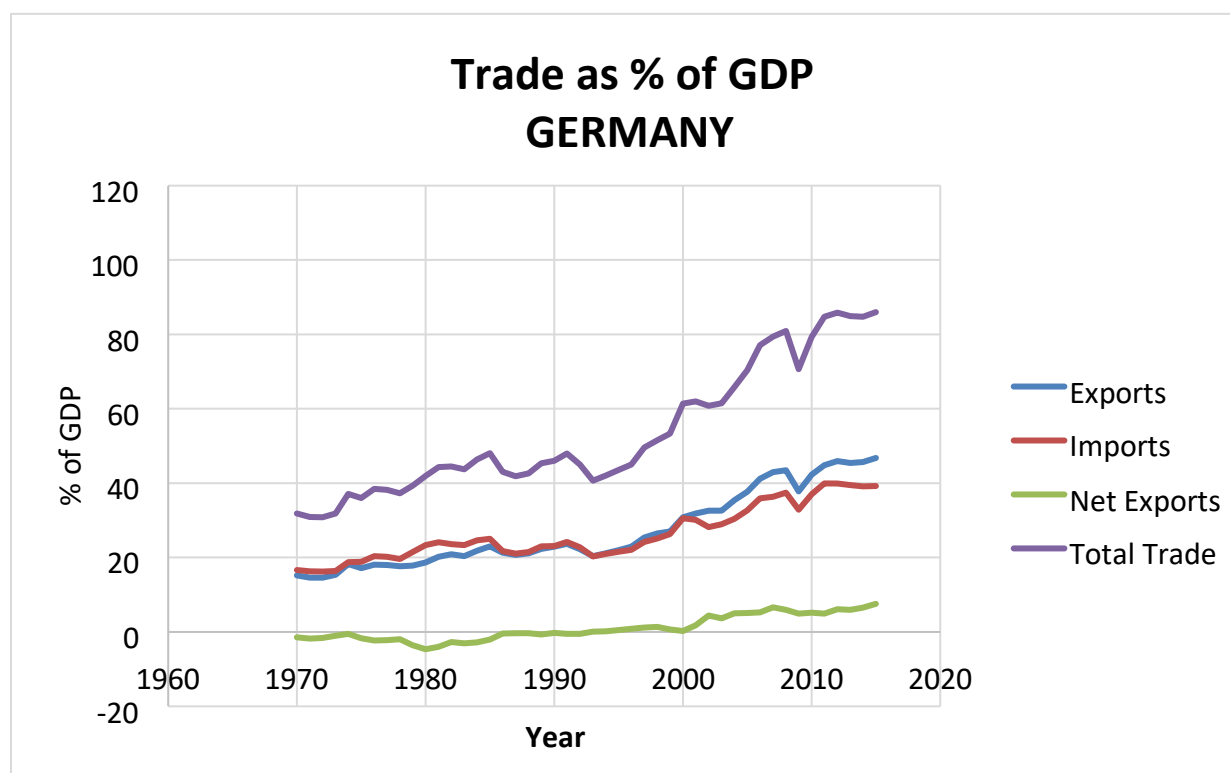


Source: World Development Index, World Bank

Year	Exports	Imports	Net Exports	Total Trade
2018	18.5	18.5	0.0	37
2017	17.8	17.2	0.6	35
2016	16.3	15.7	0.6	32
2015	17.6	18.0	-0.3	36
2014	17.5	20.0	-2.5	38
2013	15.9	18.2	-2.3	34
2012	14.5	16.1	-1.5	31
2011	14.9	15.5	-0.5	30
2010	15.0	13.6	1.5	29
2009	12.5	12.0	0.6	24
2008	17.4	17.0	0.4	34
2007	17.5	15.6	1.9	33
2006	15.9	14.5	1.4	30
2005	14.0	12.5	1.5	27
2004	13.0	11.0	2.0	24
2003	11.6	9.9	1.7	22

2002	11.0	9.7	1.4	21
2001	10.2	9.6	0.7	20
2000	10.6	9.2	1.4	20
1999	10.0	8.4	1.6	18
1998	10.5	8.7	1.8	19
1997	10.5	9.5	1.1	20
1996	9.5	9.0	0.4	19
Year	Exports	Imports	Net Exports	Total Trade
1995	9.0	7.7	1.3	17
1994	9.0	7.1	1.9	16
1993	9.1	6.9	2.2	16
1992	9.8	7.6	2.1	17
1991	9.9	8.3	1.6	18
1990	10.3	9.4	0.9	20
1989	10.2	8.8	1.5	19
1988	9.8	7.6	2.1	17
1987	10.1	7.2	2.9	17
1986	11.1	7.2	3.9	18
1985	14.1	10.8	3.3	25
1984	14.7	12.1	2.6	27
1983	13.6	12.0	1.7	26
1982	14.2	13.6	0.6	28
1981	14.4	13.7	0.7	28
1980	13.4	14.4	-0.9	28
1979	11.3	12.3	-0.9	24
1978	10.9	9.2	1.7	20
1977	12.8	11.3	1.5	24
1976	13.3	12.6	0.7	26
1975	12.5	12.6	0.0	25
1974	13.3	14.1	-0.8	27
1973	9.8	9.9	0.0	20
1972	10.4	8.2	2.2	19
1971	11.5	8.9	2.6	20
1970	10.6	9.4	1.2	20
1969	10.6	9.0	1.6	20

1968	10.1	9.0	1.1	19
1967	9.7	9.4	0.2	19
1966	10.6	9.0	1.5	20
1965	10.5	9.1	1.4	20
1964	9.5	9.7	-0.2	19
1963	9.0	9.9	-0.8	19
1962	9.4	9.3	0.1	19
1961	9.3	10.9	-1.6	20
1960	10.7	10.3	0.4	21

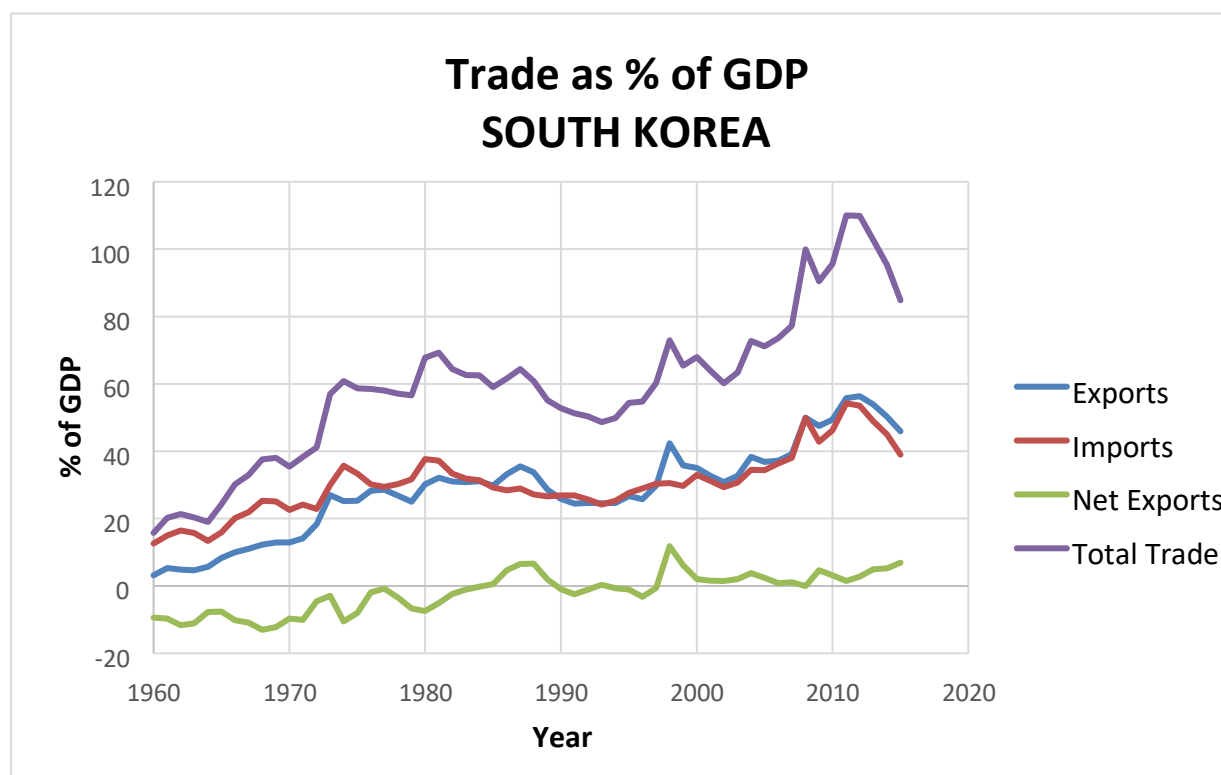


Source: World Development Index, World Bank

Year	Exports	Imports	Net Exports	Total Trade
2018	47.4	41.6	5.8	89
2017	47.4	40.6	7.1	88
2016	46	39	7	85
2015	47	39	7.6	86

2014	46	39	6.5	85
2013	45	39	6.0	85
2012	46	40	6.1	86
2011	45	40	4.9	85
2010	42	37	5.2	79
2009	38	33	4.9	71
2008	43	37	6.0	81
2007	43	36	6.6	79
2006	41	36	5.3	77
2005	38	33	5.1	70
2004	35	30	5.0	66
2003	33	29	3.7	62
2002	33	28	4.4	61
2001	32	30	1.8	62
2000	31	31	0.3	61
1999	27	26	0.7	53
1998	26	25	1.3	52
1997	25	24	1.2	50
1996	23	22	0.8	45
Year	Exports	Imports	Net Exports	Total Trade
1995	22	22	0.5	44
1994	21	21	0.2	42
1993	20	20	0.1	41
1992	22	23	-0.5	45
1991	24	24	-0.5	48
1990	23	23	-0.2	46
1989	22	23	-0.6	45
1988	21	22	-0.4	43
1987	21	21	-0.3	42
1986	21	22	-0.4	43
1985	23	25	-2.1	48
1984	22	25	-2.8	46
1983	20	23	-3.0	44
1982	21	24	-2.7	45
1981	20	24	-4.0	44

1980	19	23	-4.6	42
1979	18	21	-3.6	39
1978	18	20	-1.9	37
1977	18	20	-2.2	38
1976	18	20	-2.3	38
1975	17	19	-1.7	36
1974	18	19	-0.5	37
1973	15	16	-1.0	32
1972	15	16	-1.6	31
1971	15	16	-1.7	31
1970	15	17	-1.5	32

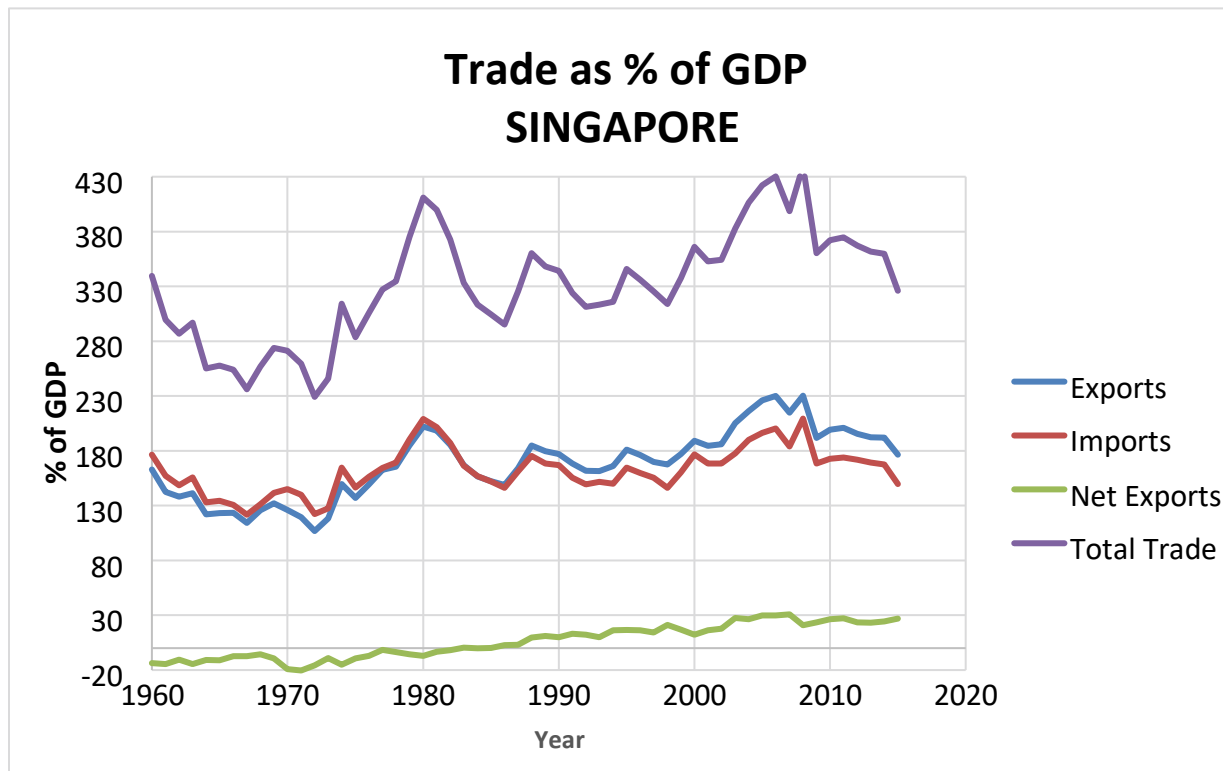


Source: World Development Index, World Bank

Year	Exports	Imports	Net Exports	Total Trade
2018	44	39	5.0	83
2017	43	38	5.0	81
2016	42.3	35.7	6.6	78
2015	45.3	38.7	6.6	84

2014	50	45	5.3	95
2013	54	49	5.0	103
2012	56	54	2.8	110
2011	56	54	1.5	110
2010	49	46	3.2	96
2009	48	43	4.7	90
2008	50	50	0.0	100
2007	39	38	1.1	77
2006	37	36	0.8	74
2005	37	34	2.4	71
2004	38	34	3.8	73
2003	33	31	2.0	63
2002	31	29	1.5	60
2001	33	31	1.6	64
2000	35	33	2.1	68
1999	36	30	6.1	65
1998	42	31	11.8	73
1997	30	30	-0.6	60
1996	26	29	-3.2	55
Year	Exports	Imports	Net Exports	Total Trade
1995	27	28	-1.0	54
1994	25	25	-0.7	50
1993	25	24	0.4	49
1992	25	26	-1.1	50
1991	24	27	-2.5	51
1990	26	27	-1.0	53
1989	29	27	1.9	55
1988	34	27	6.6	61
1987	35	29	6.6	64
1986	33	28	4.7	62
1985	30	29	0.6	59
1984	31	31	-0.3	62
1983	31	32	-1.0	63
1982	31	33	-2.4	64
1981	32	37	-5.1	69

1980	30	38	-7.4	68
1979	25	32	-6.6	57
1978	27	30	-3.5	57
1977	29	29	-0.8	58
1976	28	30	-1.9	58
1975	25	33	-8.0	59
1974	25	36	-10.5	61
1973	27	30	-3.0	57
1972	18	23	-4.5	41
1971	14	24	-10.0	38
1970	13	23	-9.6	35
1969	13	25	-12.2	38
1968	12	25	-13.0	38
1967	11	22	-10.9	33
1966	10	20	-10.1	30
1965	8	16	-7.6	24
1964	6	13	-7.7	19
1963	5	16	-11.1	20
1962	5	17	-11.6	21
1961	5	15	-9.7	20
1960	3	13	-9.4	16

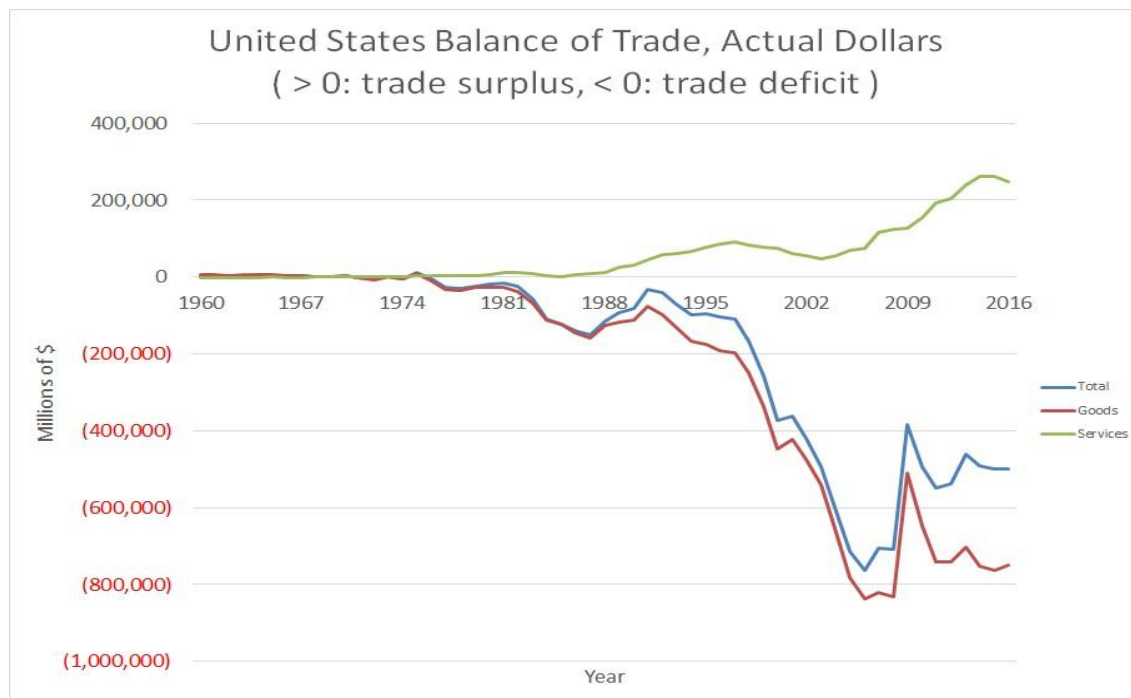


Source: World Development Index, World Bank

Year	Exports	Imports	Net Exports	Total Trade
2018	176	150	26.9	326
2017	171.4	146.6	24.8	318
2016	165.6	138.4	27.2	304
2015	178.4	150.6	27.8	329
2014	192	168	24.4	360
2013	192	169	23.1	362
2012	195	172	23.6	367
2011	201	174	27.2	375
2010	199	173	26.4	372
2009	192	168	23.5	360
2008	230	209	20.9	440
2007	215	184	30.8	399
2006	230	200	29.8	430
2005	226	196	29.8	422
2004	216	190	26.4	406
2003	205	178	27.5	383

2002	186	168	17.7	354
2001	184	168	16.2	353
2000	189	177	12.3	366
1999	177	160	16.8	338
1998	168	146	21.3	314
1997	170	155	14.4	325
1996	176	160	16.2	336
Year	Exports	Imports	Net Exports	Total Trade
1995	181	165	16.7	346
1994	166	150	16.2	316
1993	162	152	9.9	313
1992	162	150	12.1	311
1991	169	155	13.2	324
1990	177	167	10.1	344
1989	180	169	11.0	348
1988	185	175	9.6	360
1987	164	161	3.0	325
1986	149	146	2.6	295
1985	152	152	0.3	304
1984	157	157	-0.2	313
1983	167	166	0.6	333
1982	185	187	-1.8	373
1981	198	202	-3.4	400
1980	202	209	-6.9	411
1979	185	190	-5.7	375
1978	165	169	-3.7	335
1977	163	164	-1.5	327
1976	149	156	-6.9	306
1975	137	146	-9.3	284
1974	150	165	-15.0	314
1973	118	127	-9.1	246
1972	107	122	-15.6	229
1971	120	140	-20.4	259
1970	126	145	-19.0	271
1969	132	142	-9.5	274

1968	126	131	-5.5	257
1967	114	122	-7.4	236
1966	123	131	-7.2	254
1965	123	134	-11.1	258
1964	122	133	-10.9	255
1963	141	156	-14.6	297
1962	138	149	-10.4	287
1961	142	157	-14.6	300
1960	163	177	-13.7	339



United States Balance of Trade, Current Dollars

	Balance of Trade (millions of \$)		
Period	Total	Goods #	Services
2016	(500,560)	(749,926)	249,365
2015	(500,361)	(762,565)	262,203
2014	(490,176)	(752,169)	261,993

2013	(461,876)	(702,244)	240,368
2012	(536,773)	(741,171)	204,398
2011	(548,625)	(740,646)	192,020
2010	(494,658)	(648,678)	154,020
2005	(714,245)	(782,804)	68,558
2000	(372,517)	(446,783)	74,266
1995	(96,384)	(174,170)	77,786
1990	(80,864)	(111,037)	30,173
1985	(121,880)	(122,173)	294
1980	(19,407)	(25,500)	6,093
1975	12,404	8,903	3,501
1970	2,254	2,603	(349)
1965	4,664	4,951	(287)
1960	3,508	4,892	(1,384)

Source: US Census Bureau

United States Balance of Trade, 2010 Real Dollars (>0: Trade Surplus, <0: Trade deficit)



Source: U.S. Census Bureau, Economic Indicator Division

NOTE: (1) Data presented on a Balance of Payment (BOP) basis. Information on data sources and methodology are available at:

<http://www.census.gov/foreigntrade/guide/sec2.html#bop>.

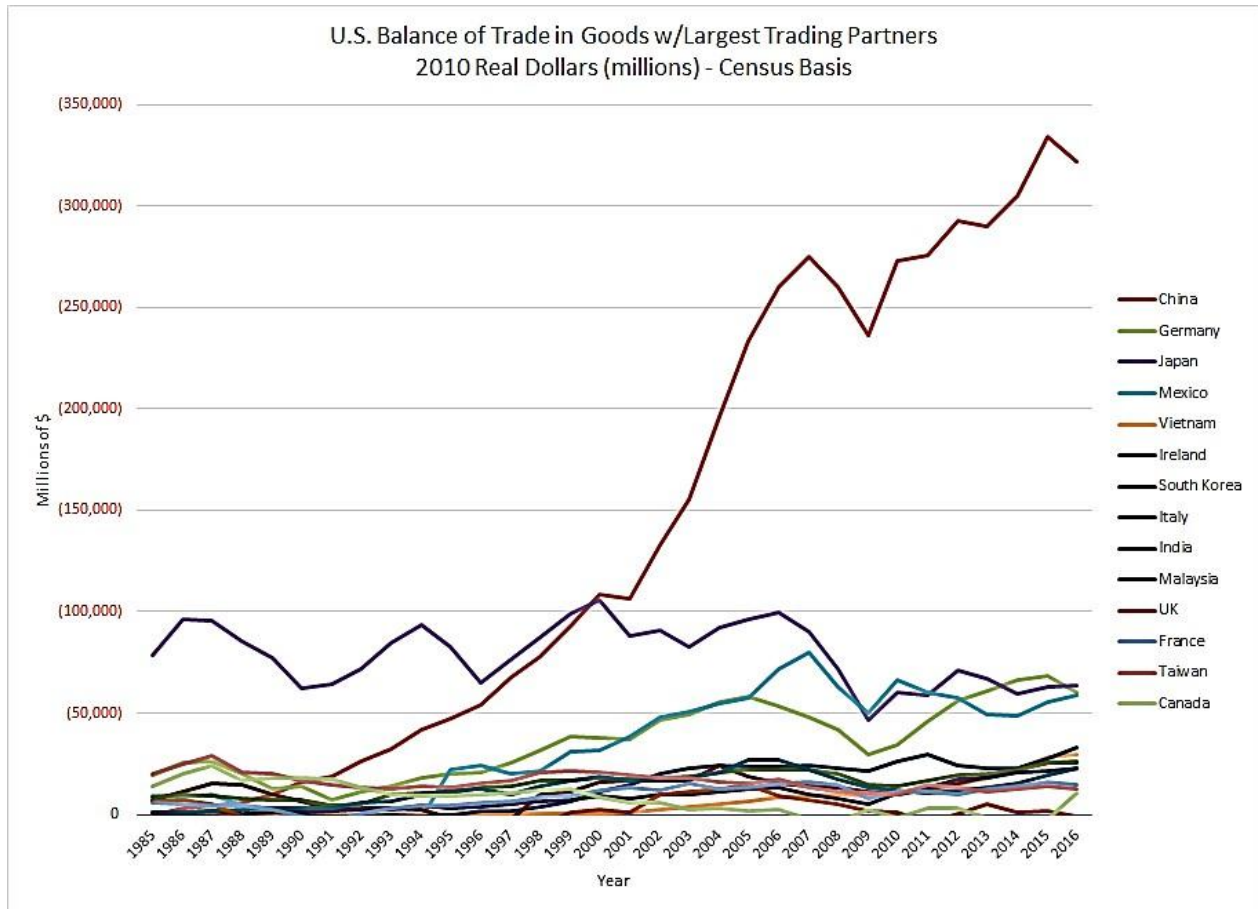
	Balance of Trade (millions of \$)		
Period	Total	Goods #	Services
2016	(464,344)	(695,668)	231,323
2015	(454,989)	(693,417)	238,427
2014	(433,431)	(665,095)	231,664
2013	(420,206)	(638,889)	218,682
2012	(498,452)	(688,258)	189,806
2011	(511,841)	(690,987)	179,145
2010	(494,658)	(648,678)	154,020
2009	(399,579)	(530,685)	131,106
2008	(687,284)	(807,306)	120,021
2007	(751,423)	(874,805)	123,382
2006	(845,566)	(929,458)	83,892
Period	Total	Goods #	Services

2005	(824,482)	(903,623)	79,139
2004	(737,199)	(803,539)	66,339
2003	(619,953)	(679,895)	59,943
2002	(541,804)	(614,600)	72,796
2001	(461,859)	(539,611)	77,751
2000	(482,444)	(578,626)	96,181
1999	(349,298)	(455,257)	105,958
1998	(227,650)	(340,120)	112,470
1997	(148,020)	(271,271)	123,251
1996	(142,051)	(260,719)	118,668
1995	(134,953)	(243,865)	108,913
1994	(140,313)	(236,243)	95,930
1993	(100,725)	(189,744)	89,021
1992	(56,900)	(140,606)	83,706
1991	(45,960)	(113,571)	67,611
1990	(122,801)	(168,622)	45,821
1989	(146,528)	(185,241)	38,711
1988	(189,361)	(209,845)	20,484

1987	(256,861)	(270,193)	13,334
1986	(242,610)	(254,069)	11,458
1985	(208,159)	(208,659)	502
1984	(187,893)	(193,784)	5,891
1983	(101,858)	(118,318)	16,460
1982	(43,187)	(65,230)	22,042
1981	(29,957)	(51,911)	21,953
1980	(39,229)	(51,546)	12,316
1979	(56,896)	(63,851)	6,955
1978	(75,887)	(86,504)	10,617
1977	(75,241)	(85,859)	10,618
1976	(17,956)	(27,997)	10,041
1975	37,995	27,271	10,724
1974	(14,595)	(18,715)	4,120
1973	7,496	3,594	3,902
1972	(23,262)	(27,421)	4,158
1971	(5,756)	(9,992)	4,235
1970	10,269	11,859	(1,590)
1969	428	2,852	(2,425)
1968	1,219	3,097	(1,878)
1967	13,056	19,053	(5,997)
1966	14,987	19,465	(4,477)
1965	24,479	25,986	(1,506)
Period	Total	Goods #	Services
1964	32,171	36,333	(4,162)
1963	22,558	27,991	(5,433)
1962	18,111	24,297	(6,186)
1961	22,613	30,030	(7,417)
1960	18,797	26,212	(7,416)
Totals in Trillions			
(1960 - 1975)	0.2	0.2	(0.0)
(1976 - 2016)	(12.8)	(16.3)	3.5
(1985 - 2016)	(12.1)	(15.5)	3.4

Source: www.census.gov

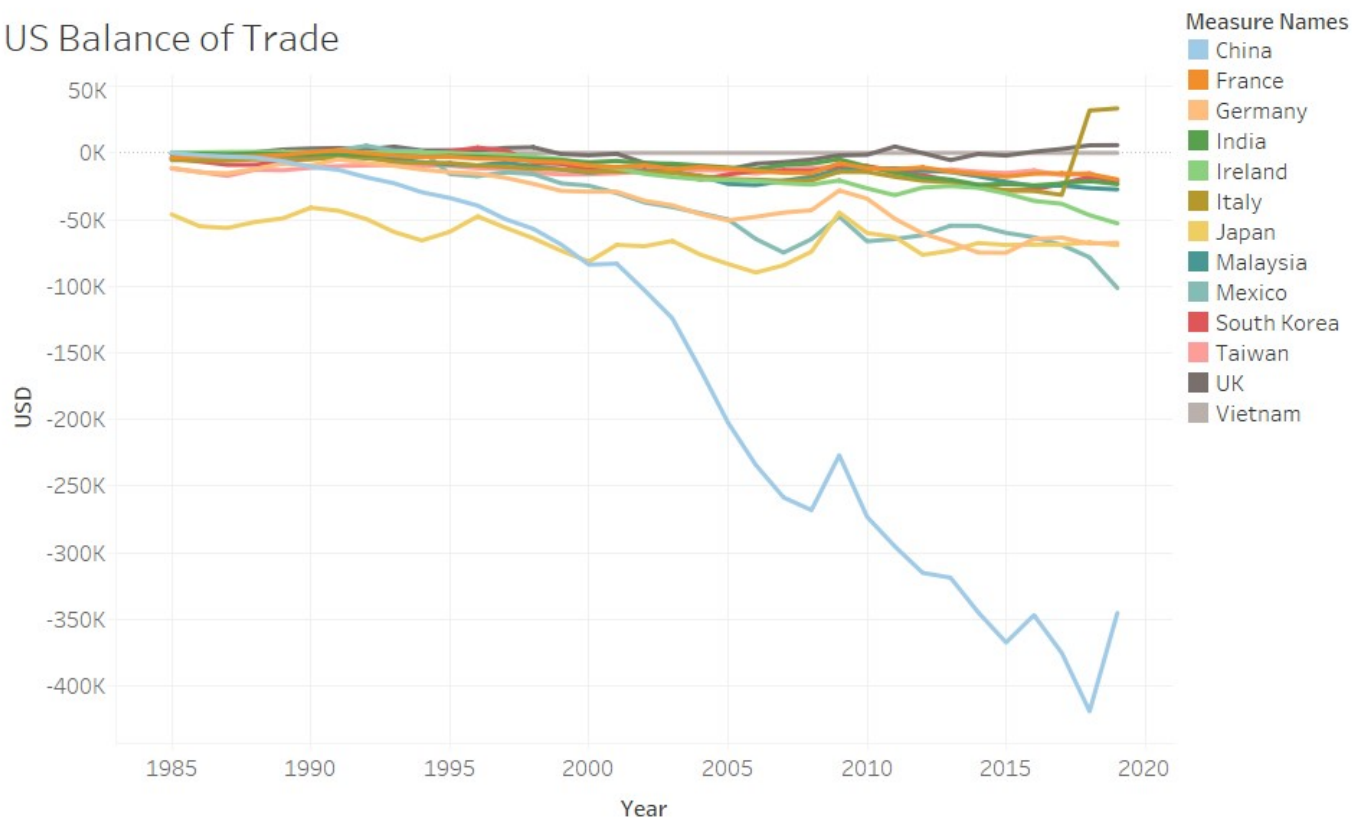
Uses balance of payments method
PPI used from FRED to convert to real dollars



U.S. Balance of Trade in Goods w/Largest Trading Partner									
2010 Real Dollars (millions) - Census Basis									
Year	China	Germany	Japan	Mexico	Vietnam	Ireland	South Korea	Italy	India
2016	(321,929)	(60,172)	(63,950)	(58,620)	(29,646)	(33,347)	(25,664)	(26,398)	(22,551)
2015	(333,878)	(68,062)	(62,672)	(55,162)	(28,127)	(27,648)	(25,746)	(25,420)	(21,223)
2014	(304,941)	(66,148)	(59,800)	(48,994)	(22,002)	(23,150)	(22,154)	(22,469)	(21,092)
2013	(289,933)	(60,936)	(66,722)	(49,676)	(17,845)	(22,621)	(18,852)	(19,971)	(18,195)
2012	(292,607)	(56,109)	(70,998)	(57,312)	(14,528)	(24,125)	(15,430)	(19,378)	(17,093)
2011	(275,454)	(46,079)	(58,896)	(60,255)	(12,289)	(29,587)	(12,315)	(16,734)	(13,633)
2010	(273,042)	(34,295)	(60,080)	(66,321)	(11,162)	(26,572)	(10,055)	(14,294)	(10,284)
2009	(236,221)	(29,353)	(46,509)	(49,729)	(9,569)	(21,485)	(11,040)	(14,745)	(4,919)
2008	(259,931)	(41,691)	(71,878)	(62,763)	(9,806)	(23,018)	(12,995)	(20,049)	(7,780)
2007	(275,382)	(47,665)	(89,807)	(79,679)	(9,300)	(24,148)	(14,020)	(22,241)	(9,699)
2006	(259,871)	(53,198)	(99,598)	(71,635)	(8,288)	(23,206)	(15,080)	(22,323)	(13,496)
2005	(233,498)	(58,372)	(96,183)	(57,557)	(6,277)	(23,417)	(18,712)	(22,492)	(12,566)
2004	(196,126)	(55,421)	(92,151)	(54,600)	(5,040)	(24,050)	(24,152)	(21,047)	(11,438)
2003	(155,736)	(49,307)	(82,887)	(51,023)	(4,056)	(22,658)	(16,515)	(18,645)	(10,137)
2002	(133,286)	(46,396)	(90,499)	(48,038)	(2,347)	(20,294)	(16,807)	(18,317)	(9,980)
2001	(106,162)	(37,154)	(88,181)	(38,380)	(757)	(14,507)	(16,610)	(17,725)	(7,640)
2000	(108,572)	(37,641)	(105,621)	(31,830)	(588)	(11,332)	(16,160)	(18,109)	(9,091)
1999	(92,758)	(38,396)	(99,134)	(30,810)	(428)	(6,228)	(11,102)	(16,567)	(7,270)
1998	(78,004)	(31,768)	(87,714)	(21,727)	(384)	(3,774)	(10,217)	(16,399)	(6,403)
1997	(67,939)	(25,514)	(76,714)	(19,890)	(139)	(1,674)	2,560	(14,235)	(5,079)
1996	(53,946)	(21,090)	(64,948)	(23,895)	389	(1,549)	5,414	(13,005)	(3,878)

1995	(47,311)	(20,232)	(82,800)	(22,134)	75	42	1,674	(10,483)	(3,403)
1994	(42,033)	(17,829)	(93,551)	1,923	174	748	(2,285)	(10,855)	(4,296)
1993	(32,629)	(13,795)	(85,030)	2,383	10	300	(3,347)	(9,672)	(2,544)

US Balance of Trade



US Balance of Trade with Largest Trading Partners (Current US \$)

	China	Germany	Japan	Mexico	Vietnam	Ireland	South Korea	Italy	India	Malaysia	UK	France	Taiwan
1985	-6	-11189	-46152	-5497	-	440.7	-4057	-5048.6	-652.8	-760.7	3664.4	3386.4	-11696.3
1986	-1664.7	-14563.2	-55029.4	-4910	-	430.9	-6374.2	-5769.1	-747	-690.8	3977.6	2912.7	-14266.4
1987	-2796.3	-15321.7	-56326.3	-5688.5	-	698.8	-8888.1	-5509.7	1064.8	1024.4	3227.4	-2787	-17208.9
1988	-3489.3	-12014.5	-51793.6	-2631.3	-	808.4	-8873.3	-4800.6	-439.4	1550.3	387.9	-2539	-12

													58 4.7
1989	-6234.3	-7970	-49058.8	-2180.1	-	917.4	-6277.9	-4718.1	-856.9	1873. 7	251 7.9	1434. 3	- 12 97 8.2
1990	-10431	-9402.1	-41104.5	-1877.8	-	784.2	-4081.2	-4759.6	-710.6	1846. 9	330 2.2	511	- 11 17 5.1
1991	-12691	-4833.9	-43385.3	2147.6	-	733.2	-1513.3	-3194.4	-1193	2201. 7	363 2.8	2012. 6	- 98 40. 5
1992	-18309	-7571.9	-49601	5381.2	4.6	599.6	-2043.6	-3593	1862. 6	3931. 3	270 6.7	204.8	- 93 45. 6
1993	-22777	-9629.7	-59354.9	1663.3	7	209.1	-2336.2	-6751.8	1775. 7	4498. 6	470 7.9	2012. 5	- 89 33. 7
1994	- 29505.1	-12515.2	-65668.2	1349.8	122.4	525.3	-1604	-7619.4	3015. 8	7012. 5	184 2.1	3080. 5	- 95 96. 8
1995	- 33789.5	-14449.6	-59136.6	-15808.3	53.3	30	1195.9	-7486.8	2430. 5	8638. 8	192 6.8	2964. 2	- 96 82. 3
1996	- 39520.2	-15450	-47580.5	-17505.6	284.8	-1135	3966.2	-9527.7	2841. 3	9282. 5	198 3.6	4190. 3	- 11 44 7
1997	- 49695.5	-18663.1	-56114.7	-14549.1	-101.7	-1224.5	1872.9	10412. 8	- 3715	7246. 9	376 6.1	4671. 6	- 12 26 2.7
1998	- 56927.4	-23184.7	-64014.1	-15856.4	-280.2	-2754	-7456.3	11968. 2	- 4672. 7	- 10043	421 9.8	6287. 2	- 14 96 0.5

	-							-	-	-		-
1999	68677.1	-28428	-73397.8	-22811.6	-316.9	-4611.1	-8220	12265.8	-5383	12364.5	830.1	-6831.3
2000	-83833	-29064.5	-81555	-24577.3	-453.8	-8750.1	-12477.7	13982.4	7019.3	14630.9	1774.5	9438.6
2001	83096.1	-29081.2	-69021.6	-30041.4	-592.8	-11355.4	-13000.8	13873.9	5980.3	12982.6	654.5	10543.5
2002	103064.9	-35876.1	-69979.4	-37145.9	-1814.8	-15692.6	-12996	14163.8	7717.4	13665.3	7540.2	9224.2
2003	124068.2	-39280.8	-66032.4	-40648.2	-3231.1	-18050.9	-13156.8	14853.7	8075.6	14526.1	8967	12166.3
2004	162254.3	-45849.7	-76236.5	-45170.2	-4169.8	-19896.3	-19981.2	17412.5	9462.7	17328.7	10372.2	10688.4
2005	202278.1	-50567.2	-83323.1	-49861	-5438	-20286.3	-16209.8	19484.9	10885.6	23224.3	12464.5	11583.4
2006	234101.3	-47922.9	-89721.8	-64531.4	-7466.4	-20904.4	-13584.5	-20109	12157.3	24089.1	8102.9	13527.8
2007	-258506	-44744.4	-84303.8	-74795.8	-8729.8	-22668.1	-13160.6	-20878	9104.4	20948.3	6876.1	14876.7
2008	268039.8	-42991.3	-74120.4	-64721.6	-10111.6	-23735.7	-13400.4	20674.1	8022.3	17786.6	4988.3	15209.2

2009	- 226877.2	-28191.9	-44669.5	-47762.2	-9190.6	-20635.6	-10603.7	- 14161.8	- 4724.6	- 12879.3	- 1776.3	-7743	- 9876.5
2010	- 273041.6	-34295.1	-60080.3	-66321	-11162.3	-26572.2	-10054.5	- 14293.7	- 10284.1	- 11821.5	- 1395.1	-11385.5	- 96.8
2011	- 295249.7	-49390.1	-63128.2	-64584.9	-13172.6	-31712.9	-13199.7	- 17936.3	- 14612.3	- 11512.8	- 4770.6	-12192.2	- 47.2
2012	- 315102.5	-60422.8	-76455.9	-61718.5	-15644.8	-25979.6	-16616.4	- 20867.6	- 18406.9	- 13117	- 145.3	-10833.2	- 52.3
2013	- 318683.8	-66978.4	-73337.9	-54601.7	-19614.3	-24864.2	-20721.7	- 21951.7	- 19999.5	- 14272.8	- 5380	-13962.6	- 41.6
2014	- 344817.7	-74763.1	-67612.7	-54722.8	-24885.2	-26179.9	-25027.3	- 25408.9	- 23858.9	- 17494.8	- 776.3	-15815.9	- 16.4
2015	- 367328.3	-74909	-69057.7	-59973.2	-30914.4	-30420.8	-28291.3	- 28008.1	- 23329.7	- 21694.2	- 1962.4	-17782.5	- 08.3
2016	- 346825.2	-64523.8	-68753.4	-63271.8	-31987	-35960.6	-27624.6	- 28548.5	- 24377.1	- 24833.2	- 931.1	-15560.3	- 16.4
2017	- 375167.9	-63573.7	-68808	-69057.8	-38343.3	-38153.5	-23060.3	- 31493.8	- 22901.6	- 24497.4	- 2983.4	-15314.6	- 68.1
2018	- 418953.9	-68025.9	-67092.6	-78327.1	-39483	-46705.8	-17933.7	- 31855.7	- 21091.1	- 26401.6	- 5757.2	-15854	- 25.2

	-								-		-	-
	345204.2	-67394.9	-69189.1	-101400.6	-55769.5	-52836.4	-20931.1	33424.1	27375.1	5858.4	19874.6	22959.4
2019												

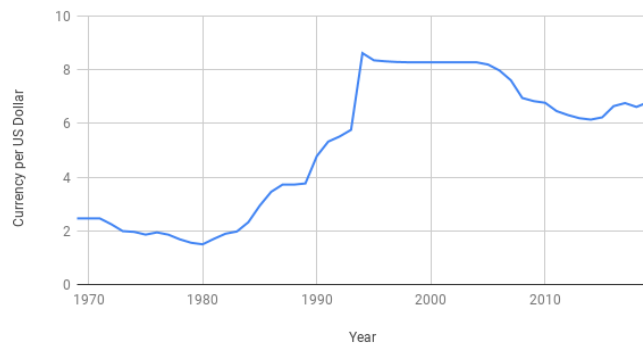
Sources: US Census Bureau

Producer Price Index: Bureau of Labor Statistics

1992	(26,568)	(10,988)	(71,976)	7,809	7	870	(2,965)	(5,214)	(2,703)
1991	(18,734)	(7,136)	(64,043)	3,170	0	1,082	(2,234)	(4,715)	(1,761)
1990	(15,841)	(14,278)	(62,422)	(2,852)	0	1,191	(6,198)	(7,228)	(1,079)
Year	China	Germany	Japan	Mexico	Vietnam	Ireland	South Korea	Italy	India
1989	(9,808)	(12,538)	(77,178)	(3,430)	0	1,443	(9,876)	(7,422)	(1,348)
1988	(5,767)	(19,858)	(85,607)	(4,349)	0	1,336	(14,666)	(7,935)	(726)
1987	(4,735)	(25,946)	(95,383)	(9,633)	0	1,183	(15,051)	(9,330)	(1,803)
1986	(2,915)	(25,503)	(96,369)	(8,598)	0	755	(11,163)	(10,103)	(1,308)
1985	(10)	(19,110)	(78,823)	(9,388)	0	753	(6,929)	(8,622)	(1,115)
Total	(4.6)	(1.2)	(2.5)	(1.1)	(0.2)	(0.4)	(0.4)	(0.5)	(0.3)
Trillions									

Appendix B: Financial Data

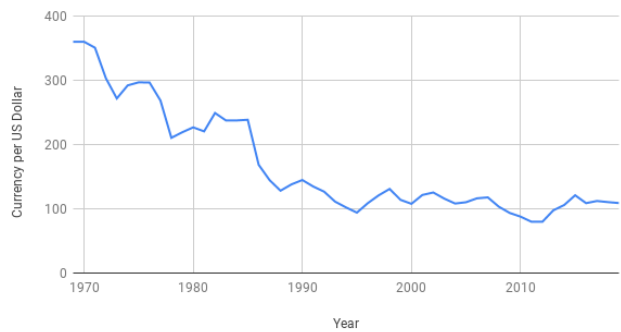
Exchange Rates China (Yuan Renminbi)



Exchange Rates Germany (Deutschmark and after 2000 Euros)



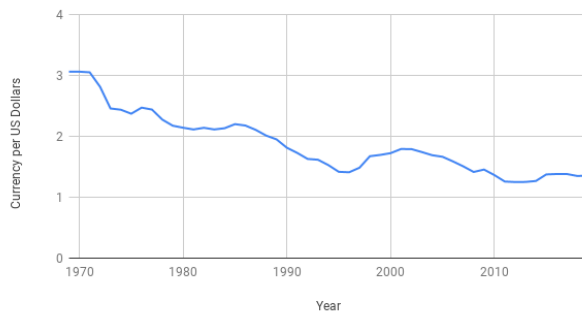
Exchange Rates Japan (Yen)



Exchange Rates South Korea (Won)



Exchange Rates Singapore (Singapore Dollar)



Source: Feenstra, Robert C. Robert Inklaar and Marcel P. Timmer (2015), 'The Next Generation of the Penn World Table' American Economic Review, 105(10), 3150-3182, available for download at www.ggdc.net/pwt

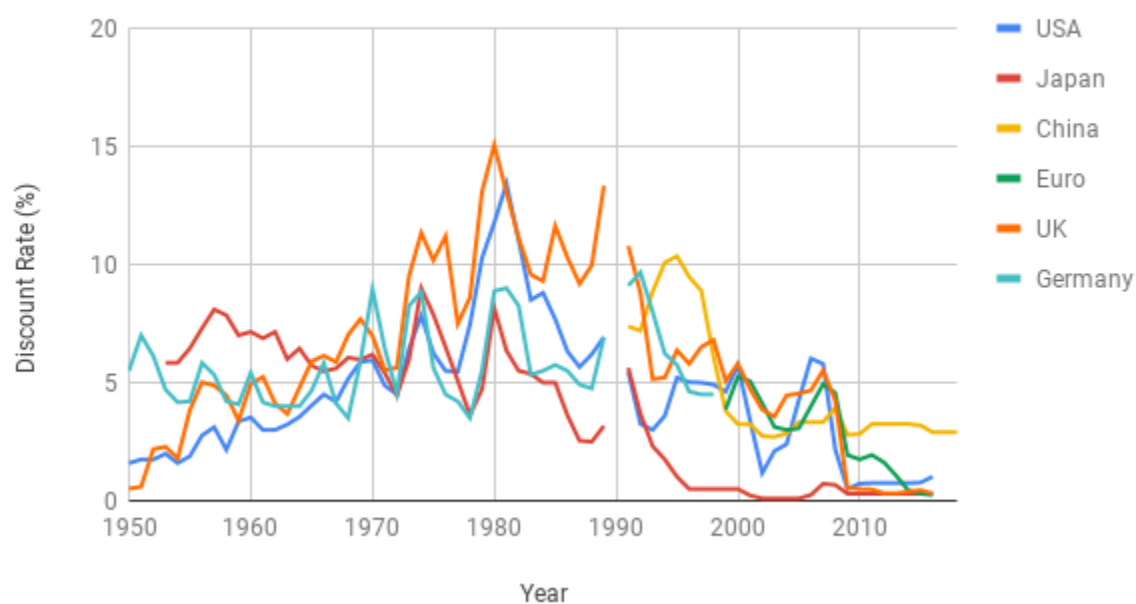
	United States	China	Japan	Germany	South Korea	Singapore
Year	US Dollar	Yuan Renminbi	Yen	Euro	Won	Singapore Dollar
2019	1	6.9	109.0	0.9	1165	1.4
2018	1	6.6	110.4	0.8	1101	1.3
2017	1	6.9	113	0.94	1134	1.41
2016	1	6.64	109	0.90	1160	1.38
2015	1	6.23	121	0.90	1131	1.37
2014	1	6.14	106	0.75	1053	1.27
2013	1	6.20	98	0.75	1095	1.25
2012	1	6.31	80	0.78	1126	1.25
2011	1	6.46	80	0.72	1108	1.26
2010	1	6.77	88	0.76	1156	1.36
2009	1	6.83	94	0.72	1277	1.45
2008	1	6.95	103	0.68	1102	1.41

2007	1	7.61	118	0.73	929	1.51
2006	1	7.97	116	0.80	955	1.59
2005	1	8.19	110	0.80	1024	1.66
2004	1	8.28	108	0.81	1145	1.69
2003	1	8.28	116	0.89	1192	1.74
2002	1	8.28	125	1.06	1251	1.79
2001	1	8.28	122	1.12	1291	1.79
2000	1	8.28	108	1.09	1131	1.72
1999	1	8.28	114	0.94	1189	1.69
1998	1	8.28	131	0.90	1401	1.67

	United States	China	Japan	Germany	South Korea	Singapore
Year	US Dollar	Yuan Renminbi	Yen	Euro	Won	Singapore Dollar
1997	1	8.29	121	0.89	951	1.48
1996	1	8.31	109	0.77	804	1.41
1995	1	8.35	94	0.73	771	1.42
1994	1	8.62	102	0.83	803	1.53
1993	1	5.76	111	0.85	803	1.62
1992	1	5.51	127	0.80	781	1.63
1991	1	5.32	135	0.85	733	1.73
1990	1	4.78	145	0.83	708	1.81
1989	1	3.77	138	0.96	671	1.95
1988	1	3.72	128	0.90	731	2.01
1987	1	3.72	145	0.92	823	2.11
1986	1	3.45	169	1.11	881	2.18
1985	1	2.94	239	1.51	870	2.20
1984	1	2.32	238	1.46	806	2.13
1983	1	1.98	238	1.31	776	2.11
1982	1	1.89	249	1.24	731	2.14
1981	1	1.70	221	1.16	681	2.11
1980	1	1.50	227	0.93	607	2.14
1979	1	1.56	219	0.94	484	2.17
1978	1	1.68	210	1.03	484	2.27
1977	1	1.86	269	1.19	484	2.44

1976	1	1.94	297	1.29	484	2.47
1975	1	1.86	297	1.26	484	2.37
1974	1	1.96	292	1.32	404	2.44
1973	1	1.99	272	1.37	398	2.46
1972	1	2.25	303	1.63	393	2.81
1971	1	2.46	351	1.79	347	3.05
1970	1	2.46	360	1.87	311	3.06
1969	1	2.46	360	2.02	288	3.06
1968	1	2.46	360	2.05	277	3.06
1967	1	2.46	360	2.05	271	3.06
1966	1	2.46	360	2.05	271	3.06
1965	1	2.46	360	2.05	266	3.06
1964	1	2.46	360	2.05	214	3.06
1963	1	2.46	360	2.05	130	3.06
1962	1	2.46	360	2.05	130	3.06
1961	1	2.46	360	2.06	125	3.06
1960	1	2.46	360	2.15	63	3.06
	United States	China	Japan	Germany	South Korea	Singapore
Year	US Dollar	Yuan Renminbi	Yen	Euro	Won	Singapore Dollar
1959	1	2.46	360	2.15	50	3.06
1958	1	2.46	360	2.15	50	3.06
1957	1	2.46	360	2.15	50	3.06
1956	1	2.46	360	2.15	50	3.06
1955	1	2.46	360	2.15	49	3.06
1954	1	2.46	360	2.15	18	3.06
1953	1	2.46	360	2.15	18	3.06
1952	1	2.46	361	2.14		3.06
1951	1		361	2.14		3.06
1950	1		361	2.14		3.06
1949	1		314	2.15		2.36
1948	1		202	1.70		2.13

Central Bank Discount Rate



Source: International Financial Statistics (IFS), International Monetary Fund (IMF)

***Note:** The Monetary Authority of Singapore, established in 1971, does not control interest rates. They rather influence monetary policy through foreign exchange mechanisms.

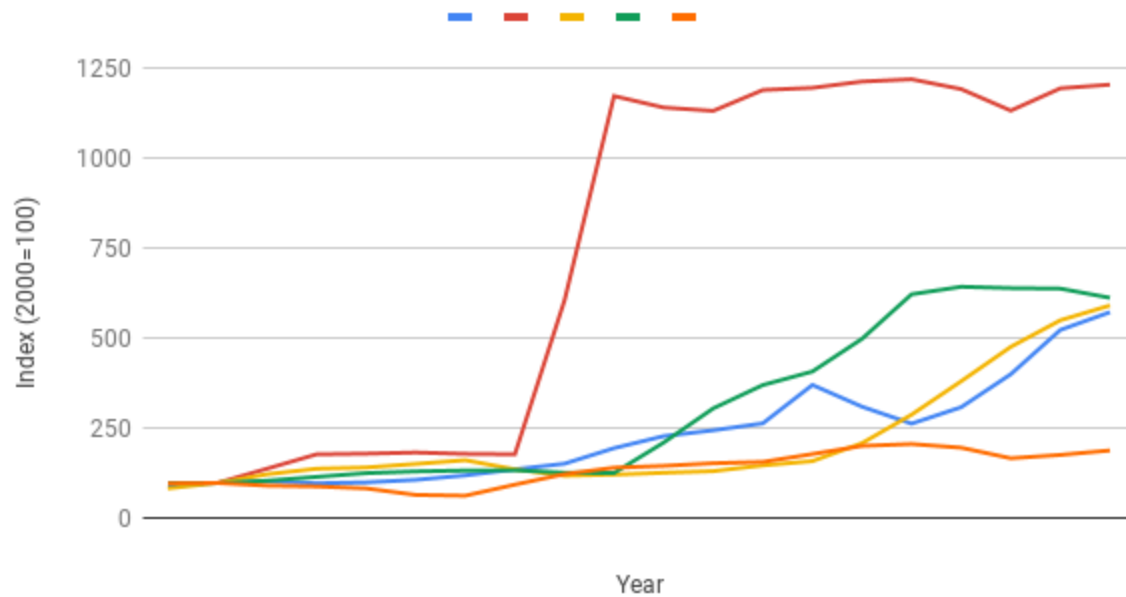
Year	United States	China	Japan	Germany	South Korea
2019	2.25	2.90	0.30	0.25	0.50
2018	3.00	2.90	0.30	0.25	0.50
2017	2.00	2.90	0.30	0.25	0.50
2016	1.25	2.90	0.30	0.25	0.50
2015	1.00	2.90	0.30	0.30	0.75
2014	0.75	3.25	0.30	0.30	1.00
2013	0.75	3.25	0.30	0.75	1.00
2012	0.75	3.25	0.30	1.50	1.25
2011	0.75	3.25	0.30	1.75	1.50
2010	0.75	3.25	0.30	1.75	1.25
2009	0.50	2.79	0.30	1.75	1.25
2008	0.50	2.79	0.30	3.00	1.75
2007	4.75	3.33	0.75	5.00	3.25
2006	6.25	3.33	0.40	4.50	2.75
2005	5.25	3.33	0.10	3.25	2.00

2004	3.25	3.33	0.10	3.00	2.00
2003	2.00	2.70	0.10	3.00	2.50
2002	0.75	2.70	0.10	3.75	2.50
2001	1.33	3.24	0.10	4.25	2.50
2000	6.00	3.24	0.50	5.75	3.00
1999	5.00	3.24	0.50	4.00	3.00

Year	United States	China	Japan	Germany	South Korea
1998	4.50	4.59	0.50	2.50	3.00
1997	5.00	8.55	0.50	2.50	5.00
1996	5.00	9.00	0.50	2.50	5.00
1995	5.25	10.44	0.50	3.00	5.00
1994	4.75	10.08	1.75	4.50	5.00
1993	3.00	10.08	1.75	5.75	5.00
1992	3.00	7.20	3.25	8.25	7.00
1991	4.11	7.20	4.50	8.00	7.00
1990	6.79	7.92	6.00	6.00	7.00
1989	7.00		4.25	6.00	7.00
1988	6.50		2.50	3.50	8.00
1987	6.00		2.50	2.50	7.00
1986	5.50		3.00	3.50	7.00
1985	7.50		5.00	4.00	5.00
1984	8.37		5.00	4.50	5.00
1983	8.50		5.00	4.00	5.00
1982	8.73		5.50	5.00	5.00
1981	12.10		5.50	7.50	11.00
1980	12.87		7.25	7.50	16.00
1979	12.00		6.25	6.00	15.00
1978	9.50		3.50	3.00	15.00
1977	6.00		4.25	3.00	14.00
1976	5.25		6.50	3.50	14.00
1975	6.00		6.50	3.50	14.00
1974	7.81		9.00	6.00	11.00
1973	7.50		9.00	7.00	11.00
1972	4.50		4.25	4.50	11.00

1971	4.63		4.75	4.00	16.00
1970	5.52		6.00	6.00	19.00
1969	6.00		6.25	6.00	22.00
1968	5.36		5.84	3.00	23.00
1967	4.50		5.84	3.00	28.00
1966	4.50		5.48	5.00	28.00
1965	4.42		5.48	4.00	28.00
1964	4.00		6.57	3.00	10.50
1963	3.50		5.84	3.00	10.22
1962	3.00		6.57	3.00	10.22
1961	3.00		7.30	3.00	10.22
1960	3.00		6.94	4.00	10.22
1959	4.00		7.30	4.00	7.30
1958	2.50		7.30	3.00	6.57
Year	United States	China	Japan	Germany	South Korea
1957	3.00		8.40	4.00	6.57
1956	3.00		7.30	5.00	6.57
1955	2.50		7.30	3.50	6.57
1954	1.50		5.84	3.00	6.57
1953	2.00		5.84	3.50	6.57
1952	1.75		5.84	4.50	5.84
1951	1.75		5.84	6.00	5.84
1950	1.75		5.11	6.00	5.84

Central Bank Balance Index (2000=100)



China – People’s Bank of China

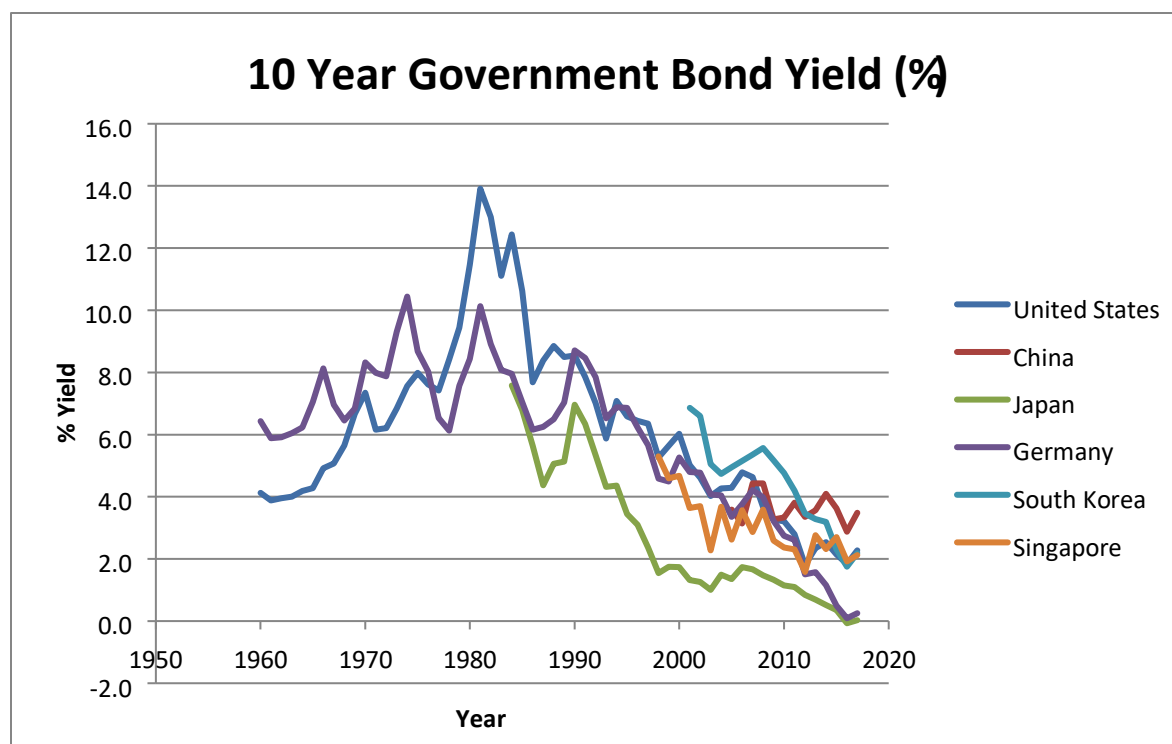
Japan – Bank of Japan

Germany (Euro) – European Central Bank

South Korea – The Bank of Korea Notes:

The monetary base is used as a proxy for the United States.

Singapore uses exchange rate targets to conduct monetary policy.



Sources:

OECD

Ministry of Finance Japan

Ministry of Finance of the People's Republic of China

Monetary Authority of Singapore

Year	United States	China	Japan	Germany	South Korea	Singapore
2019	2.1	3.1	-0.11	-0.25	1.7	1.74
2018	2.9	3.1	0.07	0.4	2.5	2.04
2017	2.3	3.5	0.0	0.3	2.2	2.1
2016	1.8	2.9	-0.1	0.1	1.8	1.9
2015	2.1	3.6	0.4	0.5	2.3	2.7
2014	2.5	4.1	0.5	1.2	3.2	2.3
2013	2.4	3.6	0.7	1.6	3.3	2.8
2012	1.8	3.4	0.8	1.5	3.5	1.6
2011	2.8	3.8	1.1	2.6	4.2	2.3
2010	3.2	3.3	1.2	2.7	4.8	2.4
2009	3.3	3.3	1.3	3.2	5.2	2.6
2008	3.7	4.4	1.5	4.0	5.6	3.6
2007	4.6	4.4	1.7	4.2	5.4	2.9
2006	4.8	3.1	1.7	3.8	5.2	3.6
2005	4.3	3.6	1.4	3.4	5.0	2.6
2004	4.3		1.5	4.0	4.7	3.7
2003	4.0		1.0	4.1	5.1	2.3

2002	4.6	1.3	4.8	6.6	3.7
2001	5.0	1.3	4.8	6.9	3.6

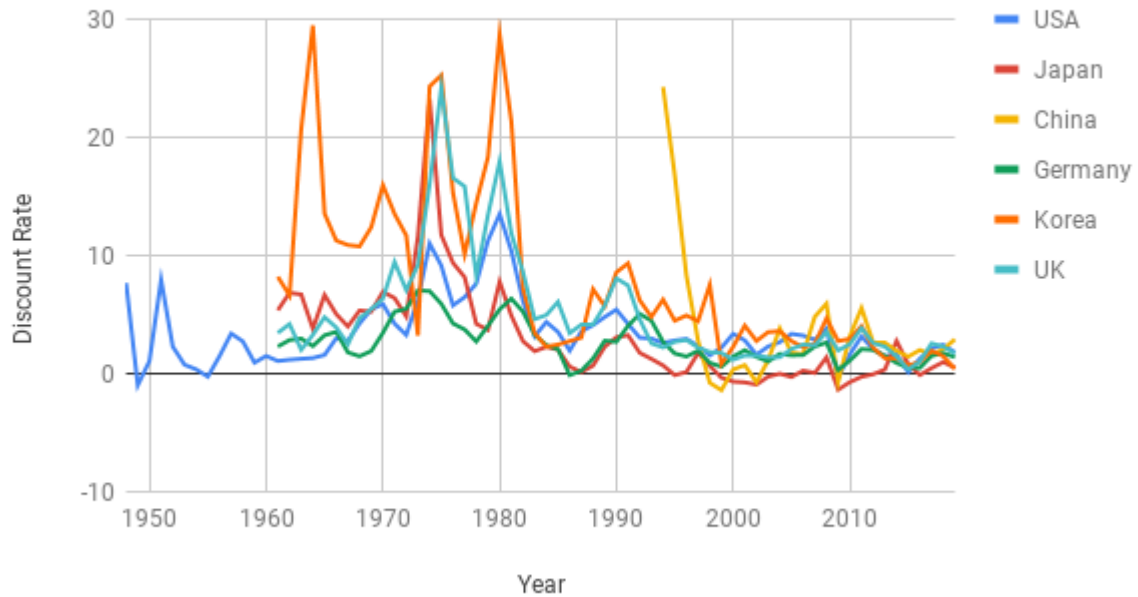
Year	United States	China	Japan	Germany	South Korea	Singapore
2000	6.0		1.7	5.3		4.7
1999	5.6		1.8	4.5		4.6
1998	5.3		1.5	4.6		5.3
1997	6.4		2.4	5.7		
1996	6.4		3.1	6.2		
1995	6.6		3.4	6.9		
1994	7.1		4.4	6.9		
1993	5.9		4.3	6.5		
1992	7.0		5.3	7.9		
1991	7.9		6.3	8.5		
1990	8.6		7.0	8.7		
1989	8.5		5.1	7.0		
1988	8.9		5.1	6.5		
1987	8.4		4.4	6.3		
1986	7.7		5.6	6.2		
1985	10.6		6.8	7.0		
1984	12.4		7.6	8.0		
1983	11.1			8.1		
1982	13.0			8.9		
1981	13.9			10.1		
1980	11.5			8.4		
1979	9.4			7.6		
1978	8.4			6.1		
1977	7.4			6.5		
1976	7.6			8.0		
1975	8.0			8.7		
1974	7.6			10.4		
1973	6.8			9.3		
1972	6.2			7.9		
1971	6.2			8.0		
1970	7.4			8.3		
1969	6.7			6.8		
1968	5.7			6.5		
1967	5.1			7.0		
1966	4.9			8.1		
1965	4.3			7.1		
1964	4.2			6.2		
1963	4.0			6.1		
1962	4.0			5.9		
1961	3.9			5.9		

1960

4.1

6.4

Consumer Inflation Rate (%)



National Bureau of Statistics of China

Ministry of Internal Affairs & Communications, Japan

Federal Statistics Office, Germany

Statistics Korea

Statistics Singapore

Year	United States	China	Japan	Germany	South Korea	Singapore
2019	1.8	2.9	0.5	1.4	0.4	0.6
2018	2.4	2.1	1.0	1.7	1.5	0.4
2017	2.1	0.9	0.2	1.6	2.2	0.7
2016	1.0	1.9	-0.4	0.3	0.8	-0.7
2015	0.1	1.4	0.4	0.3	0.7	-0.3
2014	2.1	2.3	3.6	1.0	1.7	1.8
2013	1.8	2.7	0.2	1.8	1.2	1.8
2012	1.7	2.2	-0.2	1.7	2.2	5.3
2011	3.6	6.4	-0.4	2.1	4.2	5.2
2010	1.1	2.9	-0.7	0.9	2.7	2.7
2009	-1.4	-1.7	-1.8	0.1	2.0	0.0
2008	5.0	7.1	2.0	3.2	5.5	7.5

2007	2.7	4.4	-0.2	1.9	2.5	1.7
2006	4.3	1.5	0.5	1.8	2.4	1.4
2005	2.5	1.6	-0.5	1.3	2.8	-0.2
2004	3.3	5.0	0.0	1.8	3.6	1.9
2003	2.1	0.3	-0.4	0.9	3.0	-0.3
2002	1.1	-0.8	-0.7	1.1	2.6	0.1
2001	3.2	1.4	-0.8	2.5	5.0	1.2
2000	3.7	0.5	-0.7	1.3	2.2	0.8
1999	2.0	-2.1	-0.3	0.5	0.6	0.1
1998	1.7	-1.3	0.1	1.3	7.5	-0.2
1997	2.3	2.8	2.2	1.6	4.0	1.7
1996	2.8	8.6	0.0	1.5	5.2	1.2
1995	3.0	18.2	0.3	1.6	4.2	1.8
1994	2.5	22.6	0.6	2.7	5.9	3.5
1993	3.0	15.1	0.9	4.3	4.8	2.1
1992	3.1	4.8	2.3	5.9	6.8	2.2
1991	4.7	4.4	3.4	1.3	8.7	3.9
1990	4.7	1.1	2.2	2.2	8.9	2.9
1989	5.2	22.8	3.0	2.9	5.5	2.7
1988	4.0	16.3	0.2	1.2	7.4	1.4
1987	3.7	7.8	0.3	0.2	2.8	0.6
1986	1.8	7.1	0.6	0.0	3.0	-1.9
1985	3.8		2.5	2.1	3.0	0.6
1984	4.2		1.9	2.8	1.7	3.4
1983	2.6		2.0	2.7	3.1	0.7
1982	7.1		2.3	6.0	6.4	3.8
1981	9.6		4.8	5.8	23.2	8.4
1980	14.4		8.2	5.7	27.0	10.0
1979	10.9		3.8	3.7	19.6	2.9
1978	7.4		3.9	2.7	14.6	4.6
1977	6.9		8.6	3.9	10.1	2.6
1976	6.0		9.6	3.9	15.7	-2.0

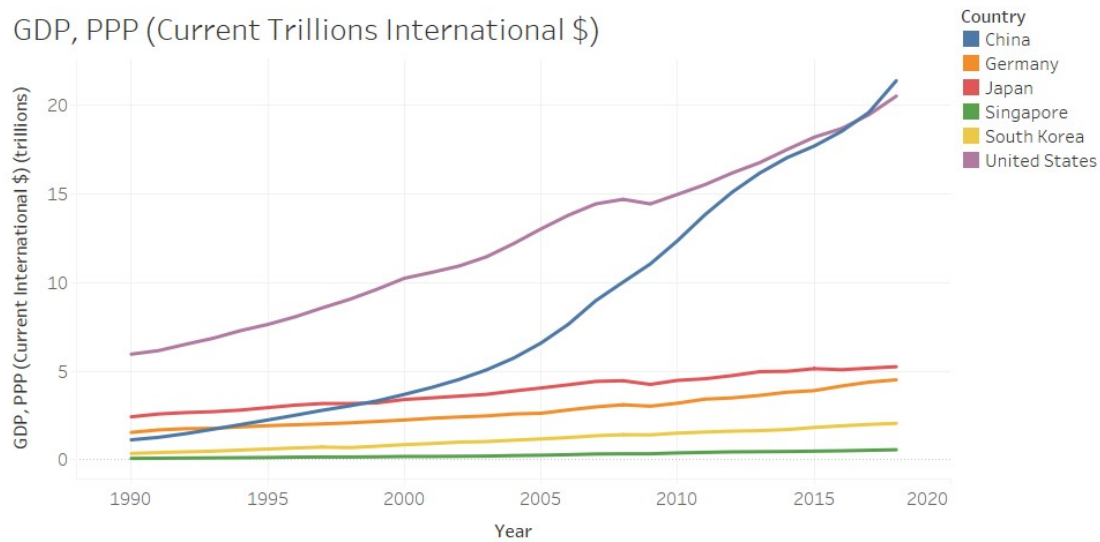
1975	9.4		13.4	6.3	26.9	3.2
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Year	United States	China	Japan	Germany	South Korea	Singapore
1974	10.9		22.3	7.0	23.5	22.7
1973	6.0		11.0	7.5	1.4	19.8
1972	2.7		4.8	5.0	14.6	1.2
1971	4.6		6.9	5.2	14.0	2.1
1970	6.0		5.8	3.5	15.1	-0.1
1969	5.5		5.7	1.9	11.5	0.5
1968	4.2		5.7	1.3	10.6	0.5
1967	2.8		2.4	2.0	9.8	2.9
1966	2.5		5.4	3.8	11.0	2.0
1965	1.9		6.8	3.6		1.1
1964	1.3		2.5	2.2		1.3
1963	1.3		8.9	2.3		1.6
1962	1.3		8.5	3.5		0.9
1961	0.7		3.9	2.4		
1960	1.7		3.5	1.6		
1959	0.7		0.3	-0.4		
1958	2.8		0.0	3.3		
1957	3.3			2.1		
1956	1.9			3.5		
1955	-0.7			1.3		

1954	0.4	0.0
1953	1.1	-1.3
1952	2.3	0.9
1951	8.8	9.2
1950	-0.4	-7.6
1949	-0.8	
1948	9.5	
1947	17.6	
1946	3.3	
1945	2.8	

Appendix C: Economic Data

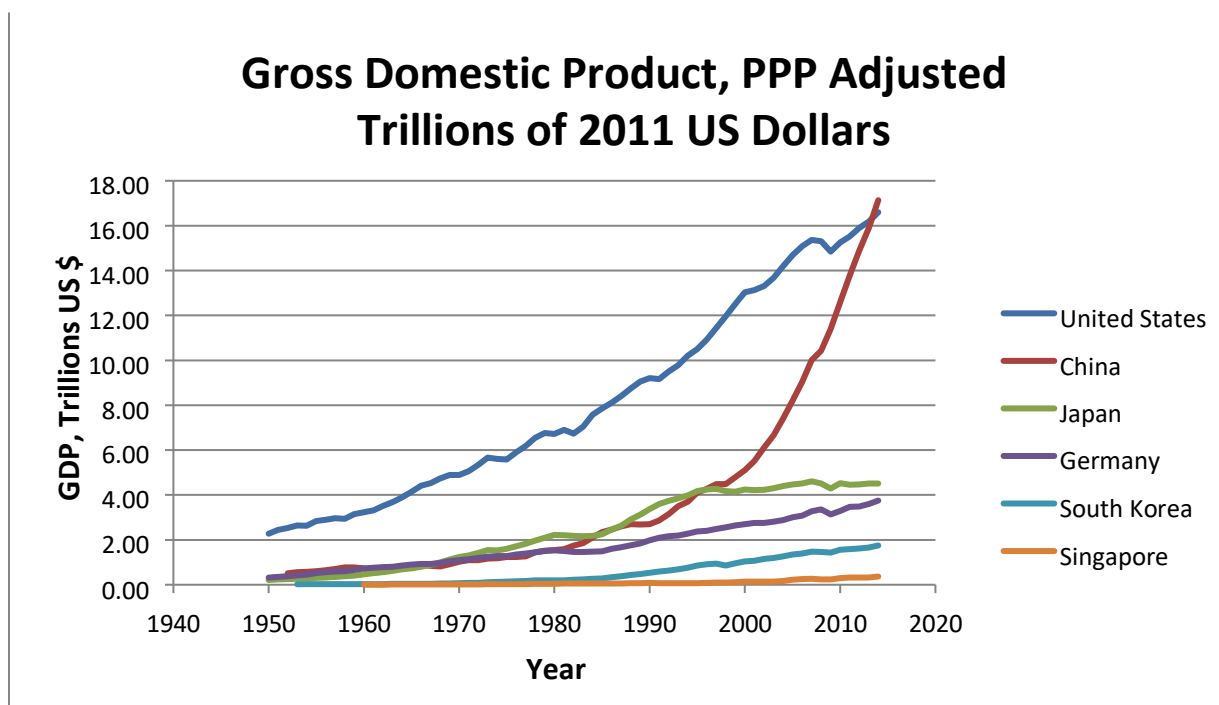
GDP, PPP (Current Trillions International \$)



	GDP, PPP (Current International \$) (trillions)					
	United States	China	Japan	South Korea	Germany	Singapore
1990	5.96	1.12	2.42	0.35	1.54	0.07
1991	6.16	1.26	2.58	0.4	1.68	0.08
1992	6.52	1.47	2.66	0.44	1.75	0.09
1993	6.86	1.72	2.71	0.48	1.77	0.1
1994	7.29	1.98	2.8	0.54	1.85	0.11
1995	7.64	2.24	2.94	0.6	1.92	0.12
1996	8.07	2.51	3.08	0.66	1.97	0.14
1997	8.58	2.79	3.17	0.71	2.02	0.15
1998	9.06	3.04	3.17	0.68	2.08	0.15
1999	9.63	3.32	3.21	0.76	2.16	0.16
2000	10.25	3.69	3.4	0.85	2.24	0.18
2001	10.58	4.08	3.49	0.91	2.34	0.18
2002	10.94	4.53	3.59	0.99	2.41	0.19
2003	11.46	5.07	3.69	1.02	2.47	0.2
2004	12.21	5.74	3.88	1.1	2.58	0.23
2005	13.04	6.59	4.05	1.17	2.62	0.25

2006	13.81	7.65	4.23	1.25	2.81	0.28
2007	14.45	8.98	4.42	1.35	2.98	0.32
2008	14.71	10.03	4.46	1.41	3.1	0.33
2009	14.45	11.06	4.25	1.4	3.02	0.33
2010	14.99	12.38	4.48	1.5	3.19	0.38
2011	15.54	13.84	4.57	1.56	3.42	0.41
2012	16.2	15.12	4.75	1.61	3.49	0.44
2013	16.78	16.19	4.97	1.64	3.63	0.45
2014	17.52	17.06	4.99	1.7	3.81	0.46
2015	18.22	17.72	5.14	1.82	3.9	0.48
2016	18.71	18.55	5.08	1.91	4.16	0.5
2017	19.49	19.62	5.17	1.99	4.38	0.53
2018	20.54	21.41	5.25	2.05	4.51	0.56

Source: World Development Indicators, World Bank

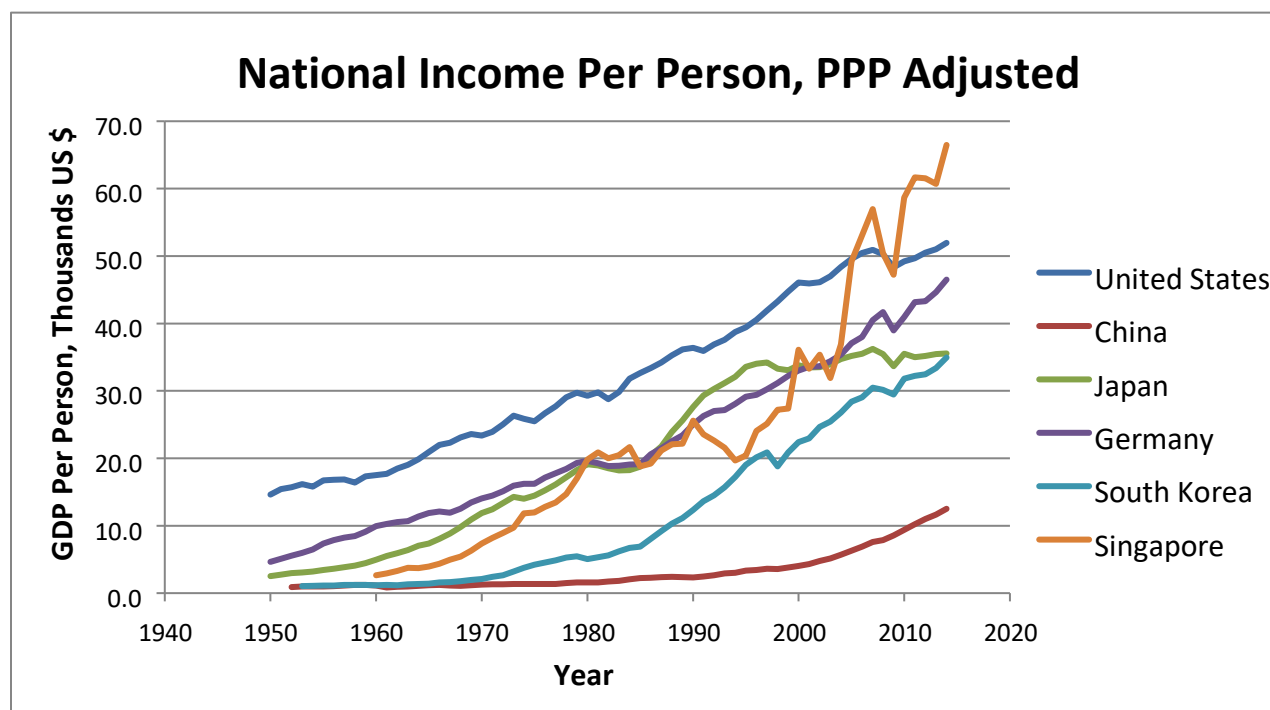


Source: Penn World Tables

Year	United States	China	Japan	Germany	South Korea	Singapore
2014	16.60	17.14	4.51	3.75	1.75	0.37
2013	16.18	15.88	4.50	3.60	1.66	0.33
2012	15.90	14.89	4.47	3.48	1.61	0.33
2011	15.52	13.78	4.45	3.47	1.59	0.32
2010	15.25	12.59	4.52	3.29	1.56	0.30
2009	14.84	11.40	4.29	3.14	1.44	0.23
2008	15.31	10.44	4.51	3.36	1.46	0.24
2007	15.36	10.00	4.61	3.27	1.47	0.27
2006	15.08	9.04	4.51	3.08	1.39	0.25
2005	14.68	8.21	4.47	3.01	1.35	0.22
2004	14.20	7.41	4.40	2.88	1.27	0.16
2003	13.68	6.66	4.30	2.80	1.20	0.14
2002	13.31	6.11	4.23	2.75	1.15	0.15
2001	13.13	5.51	4.21	2.75	1.07	0.13
2000	13.03	5.11	4.25	2.70	1.04	0.14
1999	12.51	4.79	4.15	2.64	0.96	0.10
1998	11.96	4.48	4.17	2.56	0.86	0.10
1997	11.44	4.48	4.28	2.48	0.94	0.09
1996	10.93	4.28	4.25	2.41	0.91	0.09

Year	United States	China	Japan	Germany	South Korea	Singapore
1995	10.50	4.11	4.18	2.38	0.85	0.07
1994	10.21	3.70	3.98	2.28	0.76	0.07
1993	9.79	3.50	3.85	2.19	0.69	0.07
1992	9.51	3.15	3.73	2.16	0.64	0.07
1991	9.17	2.87	3.60	2.09	0.59	0.07
1990	9.20	2.69	3.38	1.98	0.53	0.08
1989	9.06	2.68	3.12	1.84	0.47	0.07
1988	8.75	2.69	2.90	1.76	0.43	0.06
1987	8.40	2.60	2.63	1.67	0.38	0.06
1986	8.12	2.46	2.46	1.60	0.33	0.05
1985	7.86	2.34	2.25	1.48	0.28	0.05
1984	7.58	2.11	2.18	1.48	0.27	0.06
1983	7.04	1.86	2.16	1.47	0.24	0.05
1982	6.73	1.74	2.18	1.47	0.22	0.05
1981	6.90	1.59	2.21	1.50	0.20	0.05
1980	6.72	1.54	2.22	1.53	0.19	0.05
1979	6.76	1.51	2.10	1.51	0.20	0.04
1978	6.54	1.44	1.96	1.44	0.19	0.03
1977	6.18	1.27	1.82	1.40	0.17	0.03

1976	5.90	1.23	1.71	1.35	0.16	0.03
1975	5.58	1.24	1.60	1.28	0.15	0.03
1974	5.61	1.19	1.53	1.28	0.13	0.03
1973	5.66	1.17	1.54	1.26	0.11	0.02
1972	5.33	1.09	1.42	1.19	0.09	0.02
1971	5.06	1.09	1.31	1.14	0.08	0.02
1970	4.90	1.02	1.23	1.10	0.07	0.02
1969	4.89	0.91	1.12	1.05	0.06	0.01
1968	4.74	0.81	1.00	0.97	0.05	0.01
1967	4.53	0.85	0.88	0.92	0.05	0.01
1966	4.42	0.88	0.80	0.93	0.04	0.01
1965	4.15	0.82	0.72	0.90	0.04	0.01
1964	3.90	0.75	0.68	0.86	0.04	0.01
1963	3.68	0.66	0.61	0.80	0.03	0.01
1962	3.52	0.59	0.57	0.78	0.03	0.01
1961	3.32	0.53	0.52	0.75	0.03	0.00
1960	3.23	0.73	0.47	0.72	0.03	0.00
1959	3.15	0.78	0.41	0.66	0.03	
1958	2.93	0.78	0.38	0.61	0.03	
1957	2.96	0.70	0.35	0.59	0.03	
1956	2.90	0.64	0.33	0.56	0.02	
1955	2.83	0.60	0.30	0.52	0.02	
1954	2.63	0.57	0.28	0.45	0.02	
1953	2.64	0.56	0.27	0.42	0.02	
Year	United States	China	Japan	Germany	South Korea	Singapore
1952	2.53	0.51	0.26	0.38		
1951	2.44		0.23	0.35		
1950	2.27		0.21	0.32		



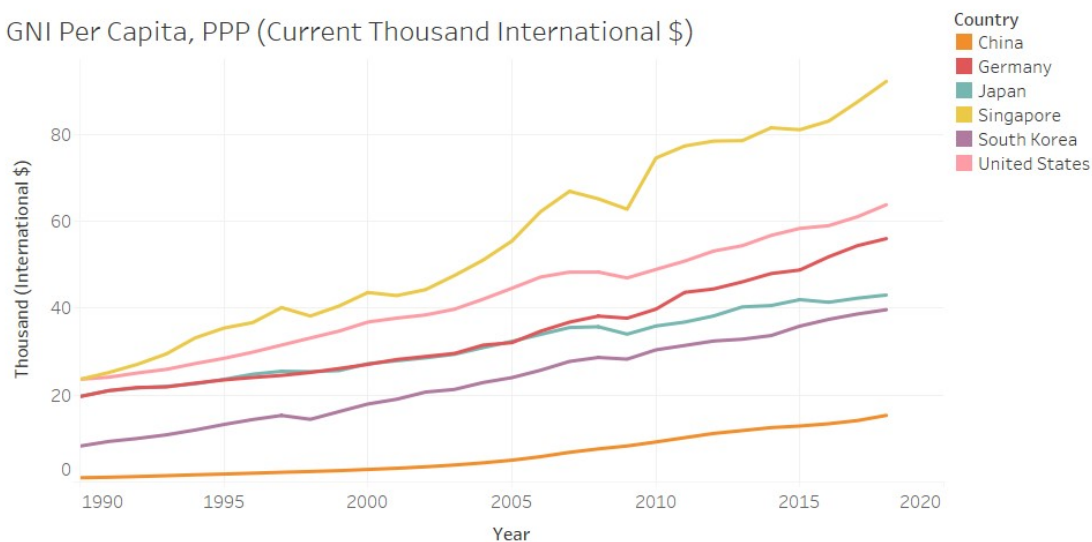
Source: Penn World Tables

Year	United States	China	Japan	Germany	South Korea	Singapore
2018	62.6	18.2	43.4	54.3	40.5	101.4
2017	59.9	16.8	42.0	52.6	38.8	96.6
2016	57.9	15.5	41.1	49.9	37.2	91.5
2015	56.8	14.4	40.4	48.0	35.8	89.0
2014	52.0	12.5	35.6	46.5	35.0	66.5
2013	51.0	11.7	35.5	44.7	33.4	60.7
2012	50.5	11.0	35.2	43.3	32.5	61.6
2011	49.7	10.2	35.0	43.2	32.2	61.7
2010	49.2	9.4	35.5	40.9	31.8	58.7
2009	48.3	8.5	33.7	39.0	29.5	47.2
2008	50.3	7.9	35.4	41.7	30.2	50.4
2007	50.9	7.6	36.2	40.5	30.5	57.0
2006	50.5	6.9	35.5	38.0	29.1	53.1
2005	49.6	6.3	35.2	37.1	28.4	49.2
2004	48.4	5.7	34.7	35.4	26.8	36.9
2003	47.0	5.2	34.0	34.4	25.4	31.9
2002	46.1	4.8	33.5	33.7	24.6	35.3
2001	45.9	4.3	33.5	33.6	23.0	33.3
2000	46.1	4.0	33.8	33.0	22.4	36.1

Year	United States	China	Japan	Germany	South Korea	Singapore
1999	44.7	3.8	33.1	32.2	20.9	27.4
1998	43.3	3.6	33.3	31.2	18.8	27.2
1997	41.9	3.6	34.2	30.3	20.9	25.1
1996	40.5	3.5	34.0	29.4	20.2	24.1
1995	39.4	3.3	33.6	29.1	19.0	20.4
1994	38.8	3.0	32.1	28.1	17.2	19.7
1993	37.6	2.9	31.2	27.1	15.7	21.5
1992	36.9	2.7	30.3	27.0	14.5	22.6
1991	35.9	2.5	29.3	26.3	13.6	23.5
1990	36.4	2.3	27.6	25.0	12.3	25.6
1989	36.2	2.4	25.6	23.4	11.1	22.2
1988	35.3	2.4	23.9	22.5	10.3	22.1
1987	34.2	2.4	21.8	21.5	9.2	21.1
1986	33.4	2.3	20.4	20.6	8.1	19.2
1985	32.7	2.2	18.8	19.1	6.9	18.8
1984	31.8	2.0	18.3	19.1	6.7	21.7
1983	29.8	1.8	18.2	18.9	6.2	20.5
1982	28.8	1.7	18.5	18.8	5.6	20.0
1981	29.8	1.6	18.9	19.2	5.3	20.9
1980	29.3	1.6	19.1	19.6	5.1	19.8
1979	29.7	1.6	18.2	19.3	5.4	17.0
1978	29.1	1.5	17.2	18.4	5.3	14.7
1977	27.7	1.4	16.1	17.8	4.9	13.5
1976	26.7	1.3	15.3	17.1	4.5	12.8
1975	25.5	1.4	14.5	16.2	4.2	12.0
1974	25.9	1.3	14.0	16.2	3.7	11.8
1973	26.3	1.3	14.3	16.0	3.2	9.7
1972	25.0	1.3	13.4	15.1	2.7	8.9
1971	23.9	1.3	12.4	14.5	2.4	8.2
1970	23.4	1.3	11.9	14.0	2.1	7.4
1969	23.6	1.2	10.9	13.4	2.0	6.3
1968	23.1	1.1	9.8	12.5	1.8	5.4
1967	22.3	1.1	8.8	11.9	1.6	4.9
1966	22.0	1.2	8.1	12.1	1.6	4.4
1965	20.9	1.2	7.4	11.9	1.4	3.9
1964	19.9	1.1	7.0	11.4	1.4	3.7
1963	19.0	1.0	6.4	10.7	1.3	3.7
1962	18.5	0.9	5.9	10.5	1.2	3.3

1961	17.7	0.8	5.5	10.2	1.2	2.9
1960	17.5	1.1	5.0	9.9	1.2	2.6
1959	17.3	1.2	4.4	9.1	1.2	
1958	16.4	1.2	4.1	8.5	1.2	
1957	16.9	1.1	3.9	8.3	1.2	
Year	United States	China	Japan	Germany	South Korea	Singapore
1956	16.8	1.1	3.6	7.9	1.1	
1955	16.7	1.0	3.4	7.3	1.1	
1954	15.8	1.0	3.2	6.5	1.1	
1953	16.2	1.0	3.1	6.0	1.0	
1952	15.7	0.9	3.0	5.6		
1951	15.4		2.8	5.1		
1950	14.6		2.5	4.6		

GNI Per Capita, PPP (Current Thousand International \$)

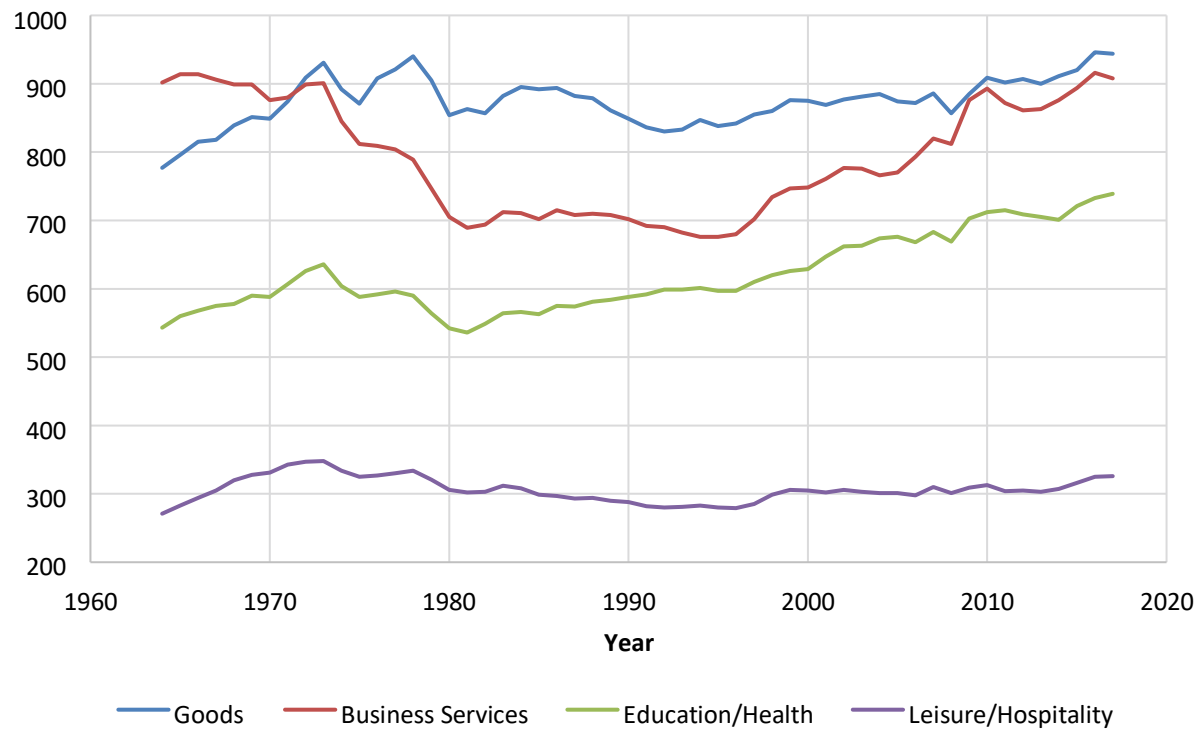


Gross National Income per Capita, PPP (Current International Thousands \$)

	United States	China	Japan	South Korea	Germany	Singapore
1990	23.64	0.98	19.71	8.26	19.64	23.61
1991	24.1	1.1	21	9.33	21.03	25.18
1992	25.09	1.26	21.64	10.02	21.75	27.08
1993	25.91	1.45	21.99	10.85	21.87	29.47
1994	27.25	1.66	22.59	11.97	22.75	33.15
1995	28.45	1.83	23.61	13.24	23.49	35.41

1996	29.87	2.03	24.8	14.37	24.04	36.68
1997	31.5	2.24	25.47	15.31	24.52	40.13
1998	33.12	2.41	25.38	14.42	25.2	38.18
1999	34.72	2.62	25.63	16.2	26.11	40.49
2000	36.8	2.89	27.22	17.95	27.06	43.6
2001	37.7	3.16	27.89	19.04	28.18	42.88
2002	38.43	3.5	28.56	20.69	28.87	44.25
2003	39.74	3.91	29.38	21.29	29.57	47.49
2004	42.06	4.41	30.92	22.89	31.49	51.05
2005	44.57	5.02	32.35	24.01	32.06	55.43
2006	47.16	5.83	33.96	25.72	34.7	62.22
2007	48.28	6.83	35.54	27.74	36.78	66.87
2008	48.29	7.62	35.71	28.65	38.16	65.14
2009	46.94	8.29	34.01	28.26	37.68	62.76
2010	48.9	9.21	35.89	30.4	39.76	74.53
2011	50.82	10.2	36.79	31.41	43.63	77.3
2012	53.12	11.17	38.19	32.43	44.4	78.42
2013	54.36	11.83	40.28	32.85	46.04	78.53
2014	56.73	12.52	40.59	33.69	47.95	81.48
2015	58.34	12.88	41.95	35.86	48.77	81.04
2016	58.97	13.4	41.35	37.42	51.81	83.02
2017	61.02	14.14	42.29	38.65	54.37	87.44
2018	63.78	15.32	43.01	39.63	55.98	92.15

US Wages, Non-Supervisory Employees Dollars per Week



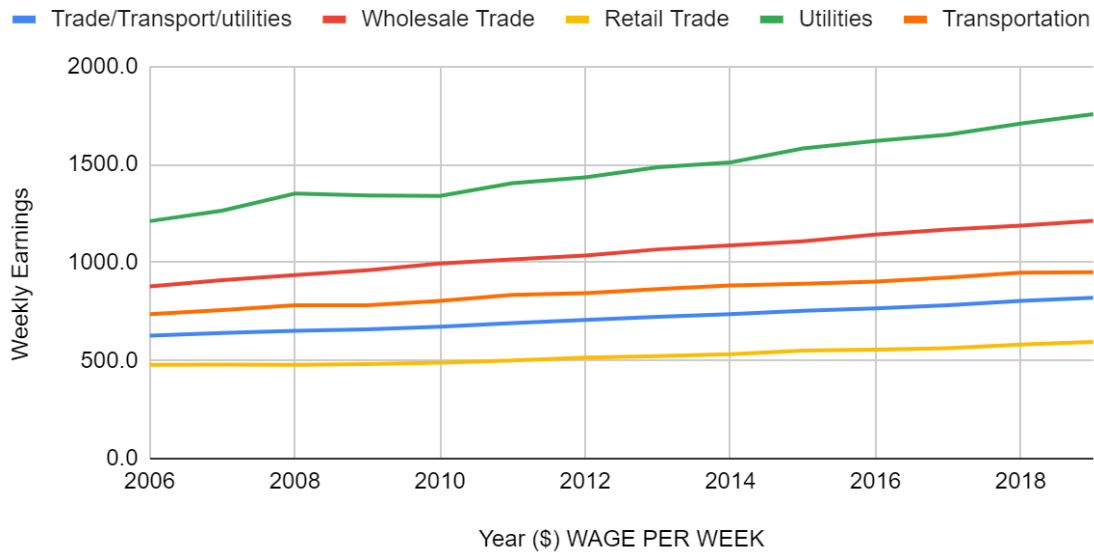
Source: Bureau of Labor Statistics, Current Employment Statistics and CPI

Year	Goods	Mining/Logging	Construction	Manufacturing	Durable	Non-Durable
2019	1018.88	1409.39	1134.3	921.02	966.63	849.13
2018	991.02	1342.22	1099.64	902.16	949.64	827.1
2017	944	1248	1043	867	920	788
2016	946	1238	1050	870	924	784
2015	920	1237	1008	847	898	741
2014	911	1296	996	833	891	741
2013	900	1262	986	829	882	745
2012	907	1284	985	839	897	749
2011	902	1217	982	836	896	744
2010	909	1187	984	852	915	758

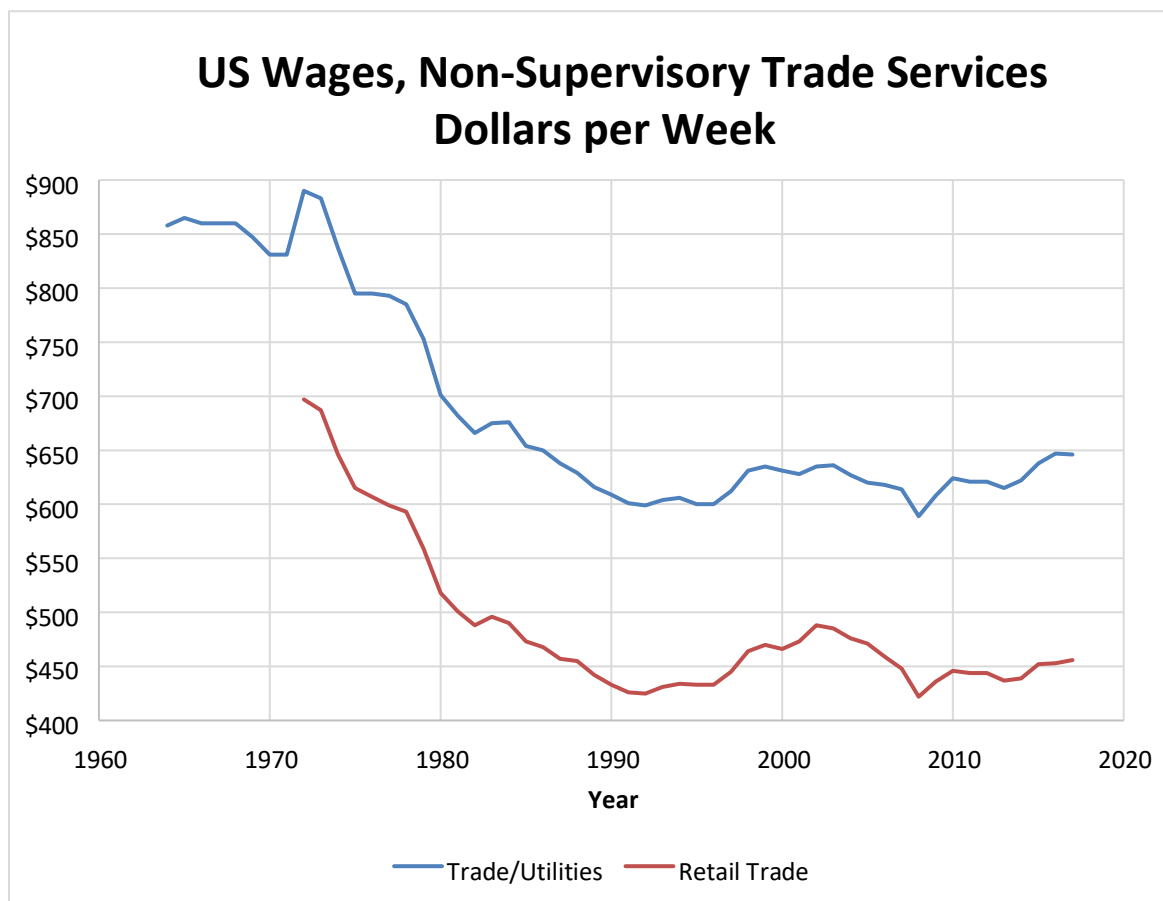
2009	885	1129	968	825	881	743
2008	857	1111	930	800	851	719
2007	886	1122	951	833	883	748
2006	872	1087	931	828	878	744
2005	874	1064	929	832	882	754
2004	885	1035	947	845	888	780
2003	881	1004	962	836	881	766
2002	877	998	957	834	879	767
2001	869	1040	953	824	866	753
2000	875	1038	958	833	881	756
1999	876	1064	953	838	889	759
1998	860	1076	942	821	865	751
1997	855	1082	921	821	882	731
1996	842	1064	901	815	878	722
1995	838	1073	911	806	869	718
1994	847	1069	911	818	885	727
1993	833	1063	904	803	868	718
1992	830	1072	899	800	862	716
1991	836	1105	916	800	861	716
1990	849	1126	936	809	870	724
1989	861	1103	968	817	878	731
1988	879	1115	972	837	902	744
1987	882	1116	976	841	907	750
1986	894	1161	985	854	922	755
1985	892	1169	994	844	917	739
1984	895	1187	1013	846	922	738
1983	882	1161	1012	833	903	734
1982	857	1154	1007	798	868	699
1981	863	1161	989	811	886	698

1980	854	1130	1001	798	868	696
1979	905	1170	1052	854	933	731
1978	940	1224	1104	885	970	752
1977	921	1181	1078	873	961	742
1976	908	1137	1104	852	938	725
1975	871	1076	1094	809	887	698
1974	892	1081	1109	830	908	712
1973	931	1087	1172	864	957	730
1972	909	1077	1152	843	927	724
1971	874	1010	1130	804	879	694
1970	849	995	1093	788	868	676
1969	851	997	1052	803	883	682
1968	839	994	1000	798	881	677
1967	818	987	983	776	859	653
1966	815	966	954	778	863	649
1965	796	939	911	766	856	636
1964	777	910	879	746	838	619

US Wages, Non-Supervisory Employees Real 2019 Dollars per Week



Year (\$) WAGE PER WEEK	Trade/Transport/utilities	Wholesale Trade	Retail Trade	Utilities	Transportation
2006	626.7	877.8	478.7	1210.9	736.1
2007	640.1	910.2	479.6	1264.2	757.2
2008	651.8	935.6	478.7	1351.9	781.7
2009	658.5	960.5	481.5	1342.3	781.9
2010	672.7	994.5	489.0	1339.6	804.7
2011	691.0	1016.4	500.9	1404.5	834.5
2012	706.9	1035.3	515.2	1434.2	843.2
2013	722.6	1067.0	523.0	1486.1	865.1
2014	736.2	1087.1	532.5	1510.0	883.4
2015	753.9	1107.9	550.4	1581.9	891.4
2016	765.7	1142.7	555.1	1619.8	902.3
2017	781.9	1167.9	563.0	1651.9	923.8
2018	804.7	1188.7	581.3	1708.7	948.3
2019	820.3	1213.4	594.6	1756.2	951.2



Source: Bureau of Labor Statistics, Current Employment Statistics and CPI

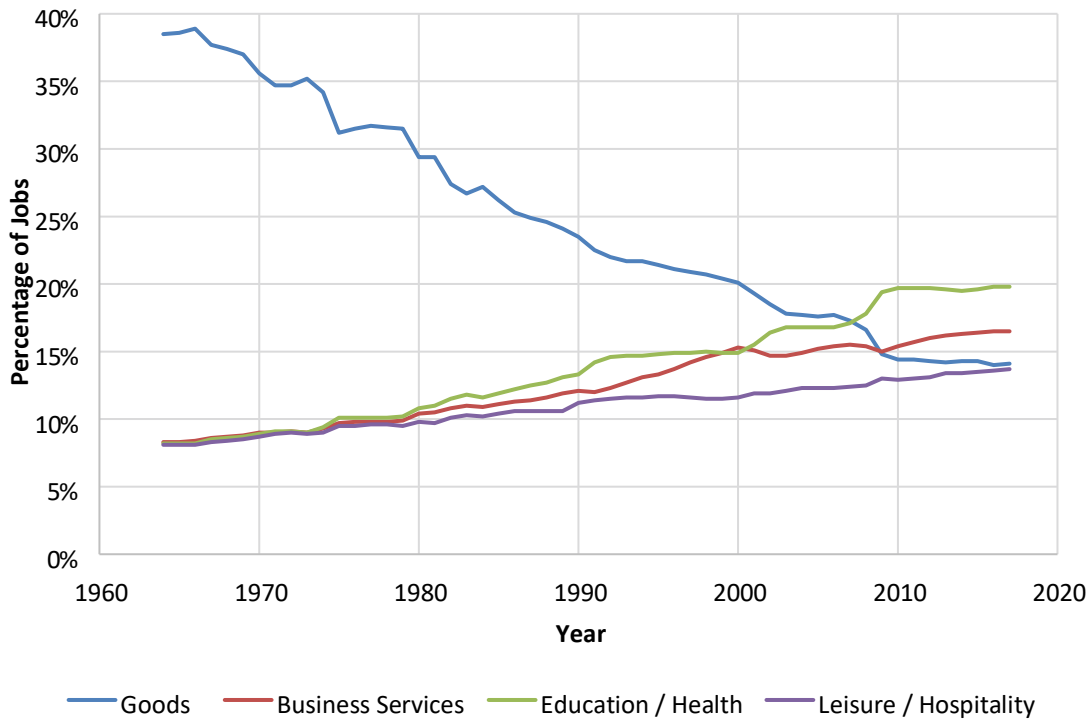
Year	Services	Trade / Utilities	Whole Trade	Retail Trade	Trans / Warehouse	Utilities	Information	Finance	Business Services
2017	699 908	646 739	955 326	456 612	806	1,524	1,084	971	
2016	701 916	647 733	950 325	453 602	827	1,526	1,101	979	
2015	686 894	638 721	926 316	452 593	817	1,464	1,053	956	
2014	670 876	622 701	907 307	439 576	795	1,410	1,049	918	
2013	664 863	615 705	904 303	437 569	783	1,385	1,026	903	
2012	665 861	621 709	903 305	444 569	781	1,394	1,023	878	
2011	666 872	621 715	909 304	444 568	787	1,374	1,029	852	
2010	674 893	624 712	908 313	446 583	793	1,414	1,050	869	
2009	661 876	608 703	881 309	436 568	764	1,384	1,050	851	
2008	631 812	589 669	851 301	422 547	735	1,328	1,006	798	
2007	647 820	614 683	872 310	448 557	761	1,387	1,021	824	
2006	635 793	618 668	864 298	459 544	768	1,365	1,019	802	
2005	635 770	620 676	853 301	471 553	769	1,380	1,004	810	
2004	635 766	627 674	859 301	476 557	791	1,337	1,000	805	

Year	Services	Trade / Utilities		Whole Trade	Retail Trade	Trans / Warehouse	Utilities		Information	Finance	Business Services
2003	641 776	636 663	869 303	485 572	793	1,344	1,017	817			
2002	640 777	635 662	869 306	488 594	775	1,324	989	781			
2001	630 761	628 647	880 302	473 587	763	1,330	997	769			
2000	625 748	631 629	886 305	466 581	786	1,358	988	754			
1999	626 635	879 470	797	1,363	987 766	747 626	306 581				
1998	618 631	865 464	814	1,331	964 749	734 620	299 574				
1997	595 702	612 610	843 285	445 556	805	1,307	938	716			
1996	580 680	600 597	821 279	433 542	808	1,258	916	697			
1995	578 676	600 597	812 280	433 542	813	1,301	893	695			
1994	580 676	606 601	822 283	434 544	825	1,285	897	687			
1993	579 682	604 599	816 281	431 540	828	1,271	900	678			
1992	576 690	599 599	809 280	425 541	821	1,237	875	664			
1991	576 692	601 592	813 282	426 543	833	1,210	888	657			
1990	582 702	609 588	815 288	433 550	872	1,241	882	655			
1989	589 708	616 584	825 290	442 547	879	1,255	909	662			

Year	Services	Trade / Utilities		Whole Trade	Retail Trade	Trans / Warehouse		Utilities	Information	Finance	Business Services	
1988	593 710	629 581		835 294	455 539	903		1,265	927		654	
1987	596 708	638 574		834 293	457 530	963		1,267	951		656	
1986	602 715	650 575		850 297	468 530	961		1,297	961		660	
1985	597 702	654 563		850 299	473 516	965		1,247	954		633	
1984	610 711	676 566		862 308	490 516	1,015		1,237	976		641	
1983	608 712	675 564		856 312	496 511	1,008		1,204	967		627	
1982	594 694	666 549		829 303	488 493	995		1,158	940		595	
1981	600 689	682 536		832 302	501 478	1,031		1,137	957		588	
1980	610 649	701 753	844 901	518 559	1,061 1,137	1,179 1,204	979 1,050	596 615	705 747	542 564	306 321	475 486
1978	679 789	785 590		938 334	593 500	1,163		1,266	1,104		648	
1977	686 804	793 596		932 330	599 497	1,183		1,274	1,119		642	
1976	685 809	795 592		929 327	607 488	1,181		1,259	1,125		642	
1975	684 812	795 588		922 325	615 474	1,142		1,213	1,101		638	
1974	717 845	837 604		959 334	646 476	1,202		1,265	1,158		659	

Year	Services	Trade / Utilities	Whole Trade	Retail Trade	Trans / Warehouse	Utilities	Information	Finance	Business Services
1973	757 901	883 636	1,017 348	687 491	1,258	1,330	1,233	693	
1972	758 899	890 626	1,028 347	697 473	1,241	1,325	1,231	696	
1971	721 880	831 607					1,155 343	683 447	
1970	718 876	831 588					1,189 331	679 421	
1969	730 899	847 590					1,221 328	692 410	
1968	735 899	860 578					1,240 320	689 387	
1967	731 906	860 575					1,243 305	675 373	
1966	732 914	860 568					1,263 294	667 356	
1965	731 914	865 560					1,278 283	659 340	
1964	720 902	858 543					1,264 271	646 317	

Shift of Non-Supervisory Jobs from Goods to Services



Source: Bureau of Labor Statistics, Current Employment Statistics

year	Goods	Mining / Logging	Construction	Manufacturing	Durable Manufacturing	Non-Durable Manufacturing
2017	14%	1%	5%	9%	5%	3%
2016	14%	1%	5%	9%	5%	3%
2015	14%	1%	5%	9%	5%	3%
2014	14%	1%	5%	9%	6%	3%
2013	14%	1%	5%	9%	5%	3%
2012	14%	1%	5%	9%	6%	4%
2011	14%	1%	5%	9%	6%	4%
2010	14%	1%	5%	9%	6%	4%
2009	15%	1%	5%	9%	6%	4%
2008	17%	1%	6%	10%	6%	4%

2007	17%	1%	6%	11%	7%	4%
2006	18%	1%	6%	11%	7%	4%

year	Goods	Mining / Logging	Construction	Manufacturing	Durable Manufacturing	Non-Durable Manufacturing
2005	18%	1%	6%	11%	7%	4%
2004	18%	1%	6%	11%	7%	4%
2003	18%	1%	6%	12%	7%	5%
2002	19%	1%	6%	12%	7%	5%
2001	19%	1%	6%	13%	8%	5%
2000	20%	1%	6%	14%	9%	5%
1999	20%	1%	6%	14%	9%	6%
1998	21%	1%	6%	15%	9%	6%
1997	21%	1%	5%	15%	9%	6%
1996	21%	1%	5%	15%	9%	6%
1995	21%	1%	5%	16%	9%	7%
1994	22%	1%	5%	16%	9%	7%
1993	22%	1%	5%	16%	9%	7%
1992	22%	1%	5%	17%	9%	7%
1991	23%	1%	5%	17%	10%	7%
1990	24%	1%	6%	17%	10%	7%
1989	24%	1%	6%	18%	10%	7%
1988	25%	1%	6%	18%	11%	7%
1987	25%	1%	6%	18%	11%	8%
1986	25%	1%	6%	19%	11%	8%
1985	26%	1%	6%	19%	11%	8%
1984	27%	1%	6%	20%	12%	8%
1983	27%	1%	5%	20%	12%	9%
1982	27%	1%	5%	21%	12%	9%
1981	29%	1%	6%	22%	13%	9%
1980	29%	1%	6%	22%	13%	9%
1979	32%	1%	6%	24%	15%	9%

1978	32%	1%	6%	24%	15%	10%
1977	32%	1%	6%	25%	15%	10%
1976	32%	1%	6%	25%	15%	10%
1975	31%	1%	6%	24%	14%	10%
1974	34%	1%	6%	27%	16%	11%
1973	35%	1%	7%	27%	16%	11%
year	Goods	Mining / Logging	Construction	Manufacturing	Durable Manufacturing	Non-Durable Manufacturing
1972	35%	1%	7%	27%	16%	11%
1971	35%	1%	7%	27%	16%	11%
1970	36%	1%	7%	28%	17%	12%
1969	37%	1%	7%	29%	18%	12%
1968	37%	1%	6%	30%	18%	12%
1967	38%	1%	6%	30%	18%	12%
1966	39%	1%	7%	31%	19%	12%
1965	39%	1%	7%	31%	18%	13%
1964	39%	1%	7%	30%	18%	13%

2017	86% 17%	23% 19.80%	5% 13.70%	13% 4.70%	4%	0%	2%	6%
2016	86% 17%	23% 19.80%	5% 13.60%	13% 4.70%	4%	1%	2%	6%
2015	86% 16%	23% 19.60%	5% 13.50%	14% 4.70%	4%	1%	2%	6%
2014	86% 16%	23% 19.50%	5% 13.40%	14% 4.80%	4%	1%	2%	6%
2013	86% 16%	23% 19.60%	5% 13.40%	14% 4.80%	4%	1%	2%	6%
2012	86% 16%	23% 19.70%	5% 13.10%	14% 4.90%	4%	1%	2%	7%
2011	86% 16%	23% 19.70%	5% 13.00%	14% 4.90%	4%	1%	2%	7%
2010	86% 15%	24% 19.70%	5% 12.90%	14% 5.00%	4%	1%	2%	7%
2009	85% 15%	24% 19.40%	5% 13.00%	14% 5.00%	4%	1%	3%	7%
2008	83% 15%	24% 17.80%	5% 12.50%	14% 4.90%	4%	1%	3%	7%
2007	83% 16%	24% 17.10%	5% 12.40%	14% 4.80%	4%	1%	3%	7%

Year	Services	Trade / Utilities	Whole Trade	Retail Trade	Trans / Warehouse	Utilities	Information	Finance	Business Services	Ed /
2006	82% 15%	24% 16.80%	5% 12.30%	14% 4.80%	4%	1%	3%	7%		
2005	82% 15%	24% 16.80%	5% 12.30%	14% 4.90%	4%	1%	3%	7%		
2004	82% 15%	24% 16.80%	5% 12.30%	14% 5.00%	4%	1%	3%	7%		
2003	82% 15%	24% 16.80%	5% 12.10%	14% 5.00%	4%	1%	3%	7%		
2002	82% 15%	24% 16.40%	5% 11.90%	14% 5.00%	4%	1%	3%	7%		
2001	81% 15%	24% 15.50%	5% 11.90%	14% 4.90%	4%	1%	3%	7%		

2000	80% 15%	24% 14.90%	5% 11.60%	14% 4.70%	4%	1%	3%	6%
1999	80% 15%	24% 14.90%	5% 11.50%	14% 4.80%	4%	1%	3%	7%
1998	79% 15%	24% 15.00%	5% 11.50%	14% 4.80%	4%	1%	3%	7%
1997	79% 14%	25% 14.90%	5% 11.60%	15% 4.80%	4%	1%	3%	7%
1996	79% 14%	25% 14.90%	5% 11.70%	15% 4.80%	4%	1%	3%	7%
1995	79% 11.70% 14.70%	25% 4.80% 11.60%	6% 1994 78% 4.80%	15% 25% 4.80%	4% 5% 15%	1% 4%	3% 7% 13%	14.80% 3% 7% 13%
1993	78% 13%	25% 14.70%	6% 11.60%	15% 4.90%	4%	1%	3%	7%
1992	78% 12%	25% 14.60%	6% 11.50%	15% 4.80%	4%	1%	3%	7%
1991	78% 12%	26% 14.20%	6% 11.40%	15% 4.90%	4%	1%	3%	7%
1990	77% 12%	26% 13.30%	6% 11.20%	15% 4.80%	4%	1%	3%	7%
1989	76% 12%	26% 13.10%	6% 10.60%	16% 4.70%	4%	1%	3%	7%
1988	75% 12%	26% 12.70%	6% 10.60%	16% 4.60%	4%	1%	3%	7%
1987	75% 11%	27% 12.50%	6% 10.60%	16% 4.50%	4%	1%	3%	7%
1986	75% 11%	27% 12.20%	6% 10.60%	16% 4.40%	4%	1%	3%	7%
1985	74% 11%	27% 11.90%	6% 10.40%	16% 4.30%	4%	1%	3%	7%
1984	73% 11%	27% 11.60%	6% 10.20%	16% 4.20%	4%	1%	3%	7%

Year	Services	Trade / Utilities	Whole Trade	Retail Trade	Trans / Warehouse	Utilities	Information	Finance	Business Services	Ed /
1983	73% 11%	27% 11.80%	6%	16%	4%	1%	3%	7%		
1982	73% 11%	27% 11.50%	6%	16%	4%	1%	3%	7%		
1981	71% 11%	26% 11.00%	6%	15%	4%	1%	3%	7%		
1980	71% 10%	27% 10.80%	6%	15%	4%	1%	3%	7%		
1979	69% 10%	26% 10.20%	6%	15%	4%	1%	3%	6%		
1978	68% 10%	26% 10.10%	6%	15%	4%	1%	3%	6%		
1977	68% 10%	26% 10.10%	6%	15%	4%	1%	3%	6%		
1976	69% 10%	27% 10.10%	6%	15%	4%	1%	3%	6%		
1975	69% 10%	27% 10.10%	6%	15%	4%	1%	3%	6%		
1974	66% 9%	26% 9.40%	6%	15%	5%	1%	3%	6%		
1973	65% 9%	26% 9.00%	6%	14%	5%	1%	3%	6%		
1972	65% 26%	6%	15%	5%	1%	3%	6%	9%	9.10%	9.00%
1971	65% 26%	3%	6%	9%	9.10%	8.90%	3.20%			
1970	64% 9%	26% 8.90%					3% 8.70%	6% 3.10%		
1969	63% 9%	25% 8.70%					3% 8.50%	6% 3.00%		
1968	63% 9%	25% 8.60%					3% 8.40%	6% 3.00%		
1967	62% 9%	25% 8.50%					3% 8.30%	6% 2.90%		

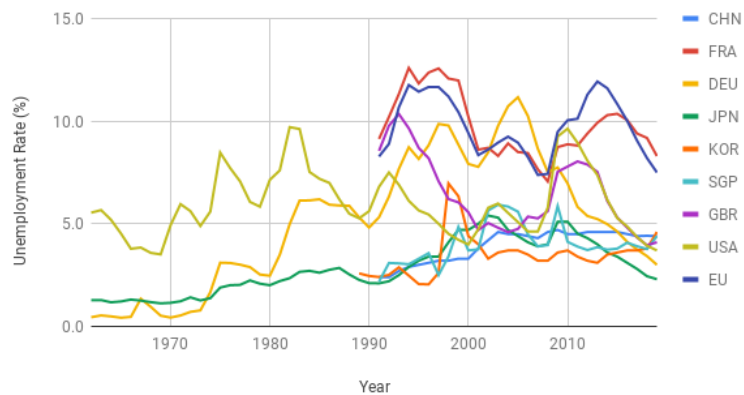
Year	Services	Trade / Utilities	Whole Trade	Retail Trade	Trans / Warehouse	Utilities	Information	Finance	Business Services	Ed /
1966	61% 8%	25% 8.20%					3% 8.10%	6% 2.80%		
1965	61% 8%	25% 8.20%					3% 8.10%	6% 2.70%		
1964	62% 8%	25% 8.20%					3% 8.10%	6% 2.70%		

Non-supervisory Employees (Wages in Real 2017 Dollars)
--

Year	1964	2017
% Jobs in Goods	39%	14%
% Jobs in Services	62%	86%
Weekly Wages in Goods	\$777	\$944
Weekly Wages in Services	\$720	\$699

Non-supervisory Employees (Wages in Real 2019 Dollars)		
Year	1964	2019
% Jobs in Goods	39%	15%
% Jobs in Services	62%	85%
Weekly Wages in Goods	\$777	\$958.73
Weekly Wages in Services	\$720	\$786.91

Unemployment Rate (% of labor force)



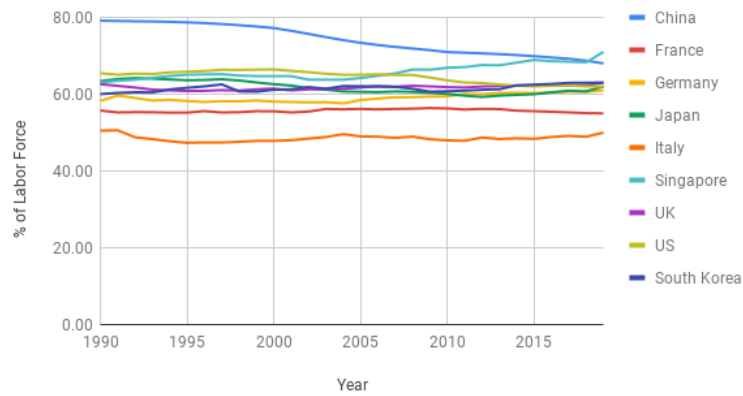
Sources: OECD and World Development Index, World Bank

Year	United States	China	Japan	Germany	South Korea	Singapore	France	EU	Great Britain
2019	3.7	4.3	2.3	3.0	4.1	4.1	8.4	6.7	3.9
2018	3.9	4.3	2.4	3.4	3.8	4.0	9.1	7.3	4.0
2017	4.4	4.4	2.8	3.7	3.7	4.2	9.4	8.1	4.3
2016	4.9	4.6	3.1	4.1	3.7	3.8	10.1	9.1	4.8
2015	5.3	4.6	3.4	4.6	3.6	3.7	10.4	10.0	5.3
2014	6.2	4.6	3.6	5.0	3.5	2.8	10.3	10.8	6.1
2013	7.4	4.5	4.0	5.2	3.1	2.8	9.9	11.3	7.5
2012	8.1	4.5	4.4	5.4	3.2	2.8	9.4	10.8	7.9
2011	9.0	4.3	4.6	5.8	3.4	2.9	8.8	9.8	8.0
2010	9.6	4.2	5.1	7.0	3.7	3.2	8.9	9.8	7.8
2009	9.3	4.3	5.1	7.7	3.6	4.4	8.7	9.1	7.5
2008	5.8	4.4	4.0	7.5	3.2	4.0	7.1	7.2	5.6
2007	4.6	3.8	3.8	8.7	3.2	3.9	7.7	7.4	5.3
2006	4.6	4.0	4.1	10.3	3.5	4.5	8.4	8.6	5.3
2005	5.1	4.1	4.4	11.2	3.7	5.6	8.5	9.6	4.8
2004	5.5	4.3	4.7	9.8	3.7	5.8	8.9	9.9	4.6
2003	6.0	4.3	5.3	9.6	3.6	5.9	8.3	9.6	4.8
2002	5.8	4.4	5.4	8.7	3.3	5.7	8.7	9.5	5.0
2001	4.7	4.5	5.0	7.8	4.0	3.8	8.6	9.2	4.7
2000	4.0	4.5	4.7	7.8	4.4	6.0	10.2	9.8	5.6
1999	4.2	4.7	4.7	8.4	6.3	4.8	12.0	10.	6.0
1998	4.5	4.7	4.1	9.2	6.8	3.4	12.1	10.4	6.2
1997	5.0	4.6	3.4	9.8	2.6	2.5	12.6	10.9	7.1
1996	5.4	4.6	3.4	8.9	2.0	3.6	12.4	11.1	8.2

Year	United States	China	Japan	Germany	South Korea	Singapore	France	EU	Great Britain
1995	5.6	4.6	3.2	8.1	2.0	3.3	11.8	11.1	8.7
1994	6.1	4.3	2.9	8.4	2.4	3.0	12.6	11.5	9.6
1993	6.9	4.3	2.5	7.9	2.8	3.1	11.3	10.7	10.3
1992	7.5	4.4	2.2	6.6	2.4	3.1	10.2	9.2	9.8
1991	6.8	4.9	2.1	5.6	2.3	2.2	9.1	8.5	8.6
1990	5.6		2.1	4.8	2.5				
1989	5.3		2.3	5.3	2.6	2.3			
1988	5.5		2.5	5.9	2.5	3.5			
1987	6.2		2.9	5.9	3.1	5.0			
1986	7.0		2.8	5.9	3.8	6.8			
1985	7.2		2.6	6.2	4.0	4.3			
1984	7.5		2.7	6.1	4.9	2.7			
1983	9.6		2.7	6.1	4.1	1.7			
1982	9.7		2.4	5.0	4.4	1.5			
1981	7.6		2.2	3.5	4.5	2.8			
1980	7.1		2.0	2.5	5.2	1.8			
1979	5.8		2.1	2.5	3.8	2.1			
1978	6.1		2.2	2.9	3.2	2.3			
1977	7.1		2.0	3.0	3.8	3.9			
1976	7.7		2.0	3.1	3.9	4.5			
1975	8.5		1.9	3.1	4.2	4.6			
1974	5.6		1.4	1.7		4.0			
1973	4.9		1.3	0.8		4.5			
1972	5.6		1.4	0.7		4.7			
1971	6.0		1.2	0.5		4.8			
1970	4.9		1.2	0.4		6.1			
1969	3.5		1.1	0.5	4.8				
1968	3.6		1.2	1.0					
1967	3.8		1.3	1.3					
1966	3.8		1.3	0.5					
1965	4.5		1.2	0.4					
1964	5.2		1.2	0.5					
1963	5.7		1.3	0.5					
1962	5.5		1.3	0.4					
1961	6.7		1.4						
1960	5.5		1.6						
1959	5.5		2.2						
1958	6.8		2.0						

1957	4.3	1.9
1956	4.1	2.3
1955	4.4	2.5

Labor Force Participation (% of Adult population)



Sources: OECD and World Development Index, World Bank

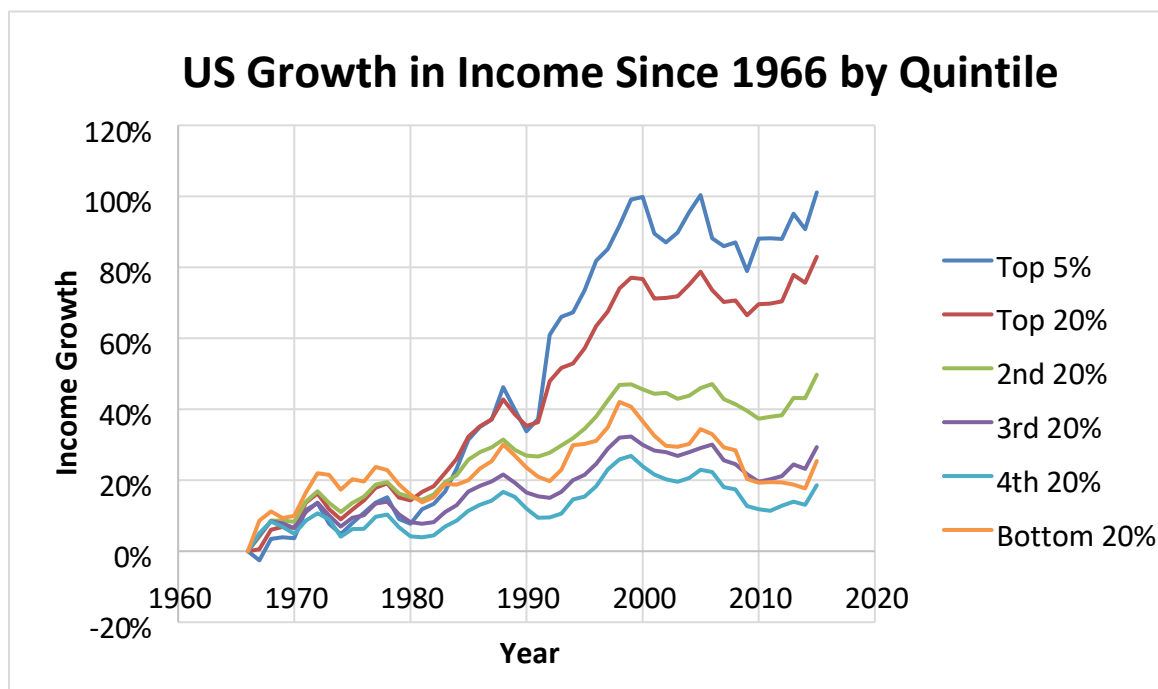
Labor Force Participation Rate (% of Total Population ages 15-64)

	France	UK	China	USA	Italy	Singapore	Japan	South Korea	Germany
2019	72	78	76	73	66	77	79	69	79
2018	72	78	76	73	66	77	79	69	78
2017	72	77	76	72	65	77	78	69	78
2016	71	77	76	72	65	77	77	68	78
2015	71	77	76	72	64	77	76	68	78
2014	71	77	76	72	64	76	76	68	78
2013	71	76	76	72	63	75	75	66	78
2012	71	76	77	72	64	75	74	66	77
2011	70	75	77	72	62	74	74	66	77
2010	70	75	77	73	62	74	74	65	77
2009	70	75	77	73	62	73	74	65	76
2008	70	76	78	74	63	73	74	66	76
2007	70	75	78	74	62	72	74	66	76
2006	70	76	78	74	63	71	73	66	75

2005	70	75	79	74	63	71	73	66	74
2004	69	75	79	74	63	70	72	66	73
2003	70	75	80	75	62	70	73	65	73
2002	69	75	81	75	61	70	72	65	72
2001	68	75	82	76	60	71	73	65	72
2000	69	75	83	76	60	71	73	64	72
1999	69	75	83	77	59	70	73	64	72
1998	68	75	83	77	59	70	73	64	71
1997	68	75	84	77	58	70	73	65	71
1996	68	75	84	76	58	70	72	65	71
1995	67	74	84	76	58	69	72	65	71
1994	67	75	84	76	58	69	72	64	71
1993	67	75	84	76	59	68	72	63	71
1992	67	75	84	76	59	68	71	63	71
1991	66	76	84	75	61	67	71	63	72
1990	67	76	84	76	60	67	70	63	70

CHN	FRA	DEU	JPN	ITA	SNG	UK	US	KOR	Year
79.13	55.74	58.25	63.42	50.48	63.05	62.60	65.44	60.01	1990
79.05	55.26	59.63	63.92	50.59	63.47	62.17	65.07	60.33	1991
78.98	55.33	59.01	64.21	48.77	63.78	61.73	65.34	60.50	1992
78.92	55.29	58.33	64.04	48.30	64.24	61.18	65.24	60.46	1993
78.83	55.19	58.53	63.82	47.74	64.74	60.99	65.69	61.22	1994
78.69	55.20	58.19	63.62	47.33	65.06	60.82	65.84	61.65	1995
78.50	55.59	57.97	63.70	47.43	65.13	60.87	66.01	62.03	1996
78.26	55.24	58.15	63.88	47.40	65.22	61.04	66.34	62.54	1997
77.96	55.31	58.14	63.56	47.61	64.83	60.94	66.31	60.71	1998

77.62	55.57	58.33	63.04	47.83	64.71	61.25	66.38	60.65	1999
77.22	55.54	58.07	62.59	47.83	64.70	61.44	66.43	61.13	2000
76.49	55.25	57.97	62.24	48.00	64.68	60.99	66.07	61.26	2001
75.69	55.47	57.86	61.55	48.43	63.78	61.25	65.71	61.85	2002
74.85	56.13	57.91	61.17	48.83	63.78	61.36	65.32	61.40	2003
74.07	56.05	57.59	60.71	49.58	63.75	61.41	65.04	62.10	2004
73.38	56.15	58.46	60.61	49.00	64.19	61.75	65.06	62.08	2005
72.79	56.03	58.85	60.53	48.93	64.79	62.08	65.17	61.99	2006
72.30	56.14	59.19	60.70	48.64	65.40	61.92	64.99	61.91	2007
71.88	56.22	59.21	60.58	48.93	66.41	62.19	64.98	61.39	2008
71.45	56.39	59.36	60.37	48.27	66.37	62.02	64.32	60.65	2009
70.97	56.28	59.44	60.07	47.97	66.88	61.83	63.59	60.76	2010
70.79	56.00	60.02	59.59	47.85	67.05	61.74	63.02	60.91	2011
70.62	56.16	59.99	59.28	48.72	67.57	61.98	62.90	61.15	2012
70.41	56.11	60.32	59.61	48.32	67.52	62.13	62.52	61.29	2013
70.18	55.70	60.38	59.82	48.50	68.21	62.20	62.21	62.29	2014
69.89	55.58	60.28	59.99	48.37	68.90	62.24	62.02	62.46	2015
69.55	55.42	60.49	60.45	48.85	68.59	62.35	62.16	62.65	2016
69.21	55.25	60.66	60.89	49.12	68.47	62.31	62.29	62.94	2017
68.72	55.06	60.62	60.73	48.91	68.29	62.32	62.02	62.97	2018
68	55	61	62	50	71	63	62	63	2019



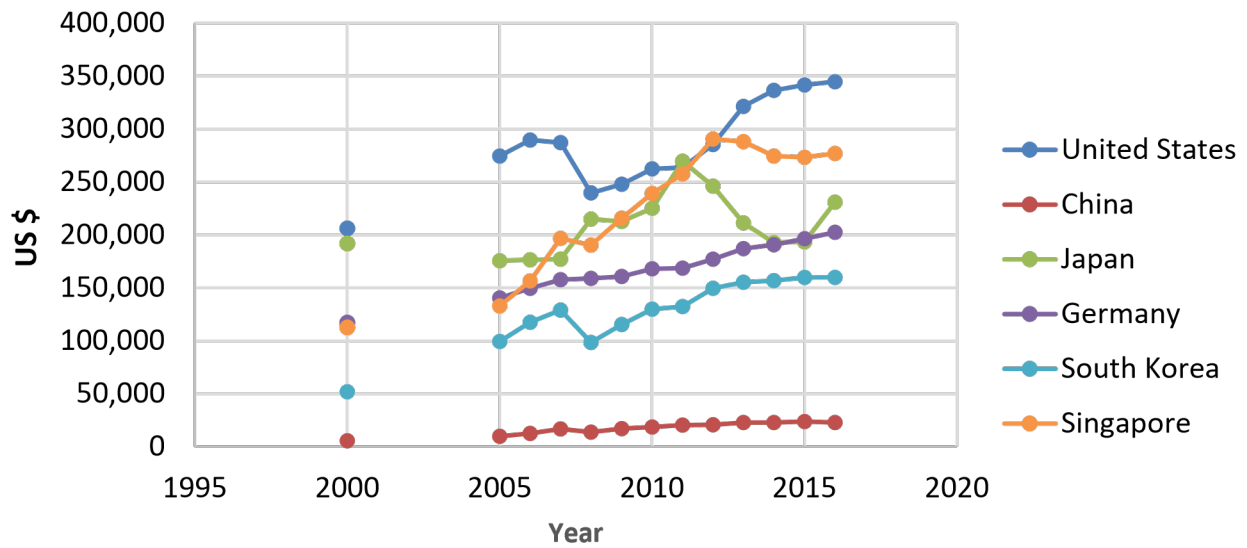
Source: Census Bureau

Year	Top 5%	Top 20%	2nd 20%	3rd 20%	4th 20%	Bottom 20%
2015	101%	83%	50%	29%	19%	25%
2014	91%	76%	43%	23%	13%	18%
2013	95%	78%	43%	24%	14%	19%
2012	88%	70%	38%	21%	13%	19%
2011	88%	70%	38%	20%	11%	19%
2010	88%	70%	37%	20%	12%	19%
2009	79%	66%	40%	22%	13%	20%
2008	87%	71%	41%	25%	17%	28%
2007	86%	70%	43%	26%	18%	29%
2006	88%	74%	47%	30%	22%	33%
2005	100%	79%	46%	29%	23%	34%
2004	96%	75%	44%	28%	21%	30%
2003	90%	72%	43%	27%	20%	29%
2002	87%	71%	45%	28%	20%	30%
2001	90%	71%	44%	28%	22%	33%
2000	100%	77%	46%	30%	24%	37%
1999	99%	77%	47%	32%	27%	41%
1998	92%	74%	47%	32%	26%	42%
1997	85%	68%	43%	29%	23%	35%

1996	82%	63%	38%	25%	18%	31%
1995	74%	57%	34%	22%	15%	30%
Year	Top 5%	Top 20%	2nd 20%	3rd 20%	4th 20%	Bottom 20%
1994	67%	53%	32%	20%	15%	30%
1993	66%	52%	30%	17%	11%	23%
1992	61%	48%	28%	15%	10%	20%
1991	37%	36%	27%	15%	9%	21%
1990	34%	35%	27%	17%	12%	24%
1989	40%	39%	29%	19%	15%	27%
1988	46%	43%	31%	22%	17%	30%
1987	37%	37%	29%	20%	14%	25%
1986	35%	35%	28%	18%	13%	23%
1985	31%	32%	26%	17%	11%	20%
1984	23%	26%	21%	13%	9%	19%
1983	17%	22%	19%	11%	7%	19%
1982	13%	18%	16%	8%	4%	15%
1981	12%	17%	15%	8%	4%	14%
1980	8%	14%	15%	8%	4%	16%
1979	9%	15%	16%	10%	7%	19%
1978	15%	19%	19%	14%	10%	23%
1977	14%	18%	19%	13%	10%	24%
1976	11%	14%	15%	10%	6%	20%
1975	8%	12%	14%	9%	6%	20%
1974	5%	9%	11%	7%	4%	17%
1973	8%	12%	14%	10%	9%	22%
1972	14%	16%	17%	14%	11%	22%
1971	12%	14%	14%	11%	9%	17%
1970	4%	7%	8%	7%	5%	10%
1969	4%	7%	9%	8%	7%	9%
1968	4%	6%	9%	8%	8%	11%
1967	-3%	1%	4%	4%	5%	9%
1966	0%	0%	0%	0%	0%	0%

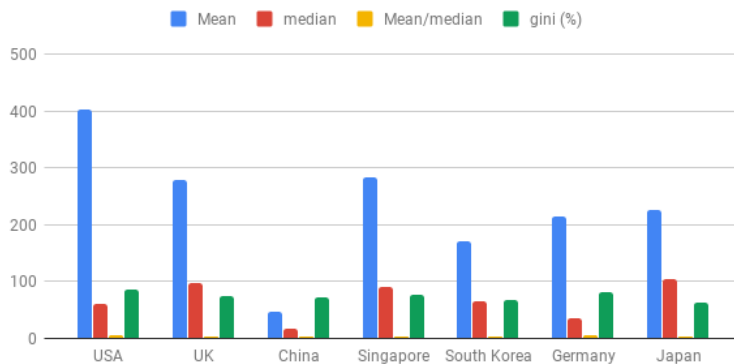
Source: Credit Suisse Global Wealth Databook 2016

Mean Wealth per Adult (USD)



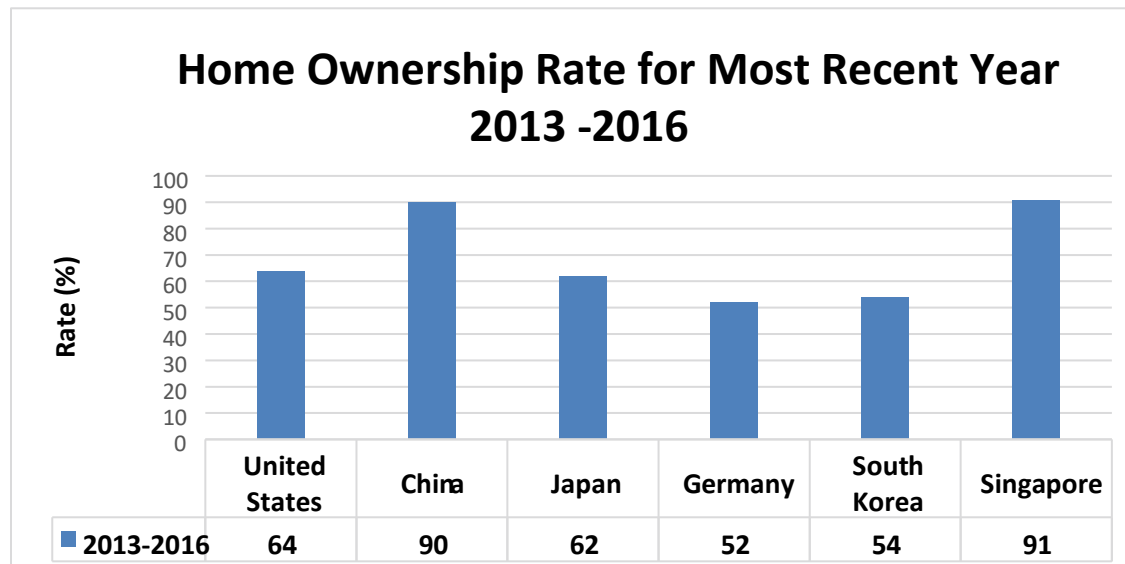
Year	United States	China	Japan	Germany	South Korea	Singapore
2019	432,365	58,544	238,104	216,654	175,015	297,873
2018	420,386	47,810	228,929	213,410	177,761	290,898
2017	388,600	45,969	225,057	203,946	160,609	268,800
2016	344,692	43,208	230,946	202,402	159,914	276,885
2015	341,609	43,536	193,448	196,253	159,705	273,085
2014	336,522	41,759	192,720	190,745	156,689	274,470
2013	321,397	39,152	211,190	187,147	155,144	288,098
2012	285,374	33,229	246,081	177,192	149,466	290,370
2011	263,555	30,035	269,485	168,629	132,140	257,582
2010	262,278	24,364	225,274	167,858	129,746	239,153
2009	247,893	17,029	212,586	160,569	115,434	215,737
2008	239,534	13,690	214,771	158,992	98,441	190,389
2007	287,096	16,643	177,062	157,579	128,887	196,692
2006	289,636	12,582	176,585	149,523	117,602	156,541
2005	274,509	9,770	175,634	140,388	99,303	132,774
2000	206,116	5,672	191,877	117,149	51,749	112,757

Adult Wealth (Thousands of US Dollars) (Higher Gini % Signifies Higher Inequality)



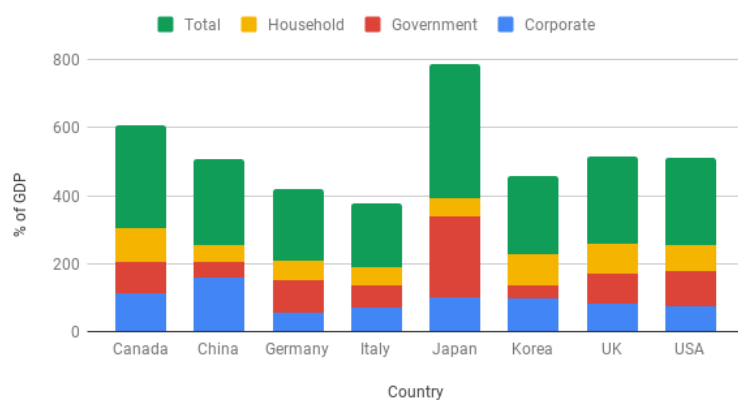
	USA	UK	CHN	SING	SK	GER	JAP
Mean Wealth	403.97	279.04	47.81	283.11	171.73	214.89	227.23
Median Wealth	61.66	97.169	16.33	91.65	65.46	35.16	103.86
Mean/Median	6.6	2.9	2.9	3.1	2.6	6.1	2.2

Source: Credit Suisse Global Wealth Databook 2016



Source: Trading Economics

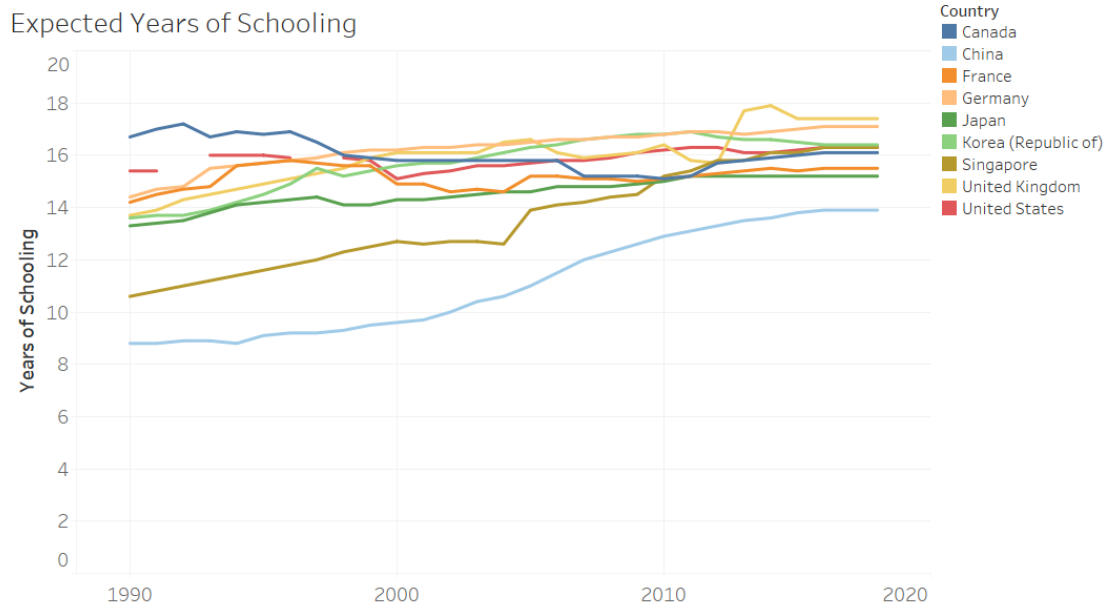
Estimate of Debt and it's Components, % of GDP



Compo nent	Canada	China	Germany	Italy	Japan	Korea	UK	USA
Corporat e	114.5048	157.4348	54.38847	72.6448	99.87973	97.72233	83.06197	73.24032
Govern ment	89.72657	46.96003	96.80129	63.85187	237.6471	37.128	87.52462	105.1994
Househ old	100.0208	49.21803	58.62207	52.72978	57.0429	94.19397	86.34994	77.6622
Total	304.25217	253.61286	209.81183	189.22645	394.56973	229.0443	256.93653	256.10192

Sources: OECD, Bank for International Settlements

Appendix D: Social Data

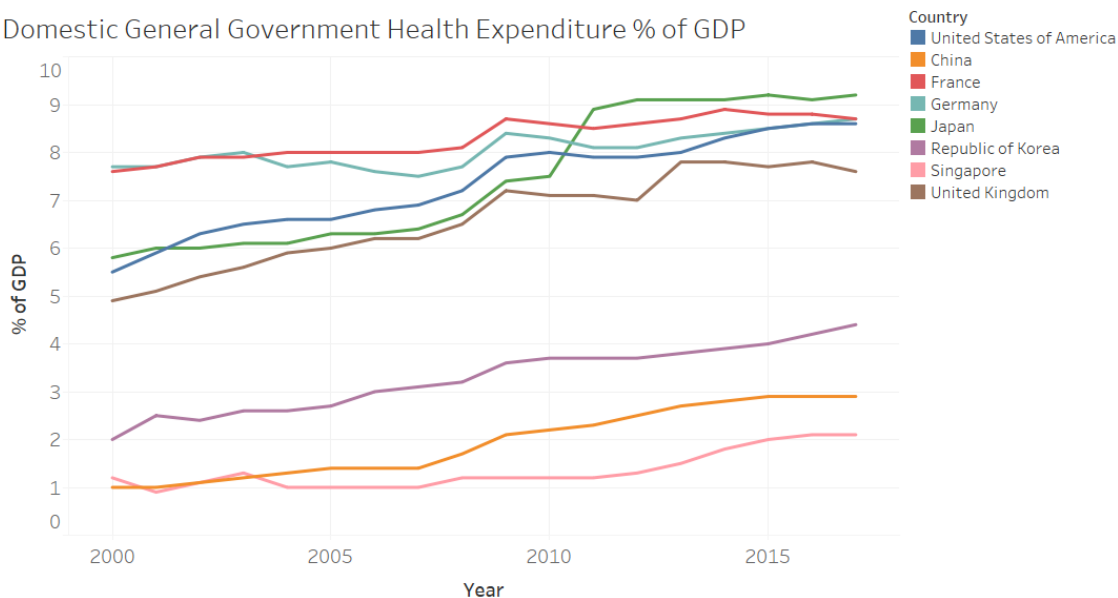


Source: United Nations Development Program

Year	Canada	China	France	Germany	Japan	S Korea	Singapore	UK	US
1990	16.7	8.8	14.2	14.4	13.3	13.6	10.6	13.7	15.4
1991	17	8.8	14.5	14.7	13.4	13.7	10.8	13.9	15.4
1992	17.2	8.9	14.7	14.8	13.5	13.7	11	14.3	
1993	16.7	8.9	14.8	15.5	13.8	13.9	11.2	14.5	16
1994	16.9	8.8	15.6	15.6	14.1	14.2	11.4	14.7	16
1995	16.8	9.1	15.7	15.7	14.2	14.5	11.6	14.9	16
1996	16.9	9.2	15.8	15.8	14.3	14.9	11.8	15.1	15.9
1997	16.5	9.2	15.7	15.9	14.4	15.5	12	15.3	
1998	16	9.3	15.6	16.1	14.1	15.2	12.3	15.5	15.9
1999	15.9	9.5	15.6	16.2	14.1	15.4	12.5	15.9	15.8
2000	15.8	9.6	14.9	16.2	14.3	15.6	12.7	16.1	15.1
2001	15.8	9.7	14.9	16.3	14.3	15.7	12.6	16.1	15.3
2002	15.8	10	14.6	16.3	14.4	15.7	12.7	16.1	15.4
2003	15.8	10.4	14.7	16.4	14.5	15.9	12.7	16.1	15.6

2004	15.8	10.6	14.6	16.4	14.6	16.1	12.6	16.5	15.6
2005	15.8	11	15.2	16.5	14.6	16.3	13.9	16.6	15.7
2006	15.8	11.5	15.2	16.6	14.8	16.4	14.1	16.1	15.8
2007	15.2	12	15.1	16.6	14.8	16.6	14.2	15.9	15.8
2008	15.2	12.3	15.1	16.7	14.8	16.7	14.4	16	15.9
2009	15.2	12.6	15	16.7	14.9	16.8	14.5	16.1	16.1
2010	15.1	12.9	15.1	16.8	15	16.8	15.2	16.4	16.2
2011	15.2	13.1	15.2	16.9	15.2	16.9	15.4	15.8	16.3
2012	15.7	13.3	15.3	16.9	15.2	16.7	15.8	15.7	16.3
2013	15.8	13.5	15.4	16.8	15.2	16.6	15.8	17.7	16.1
2014	15.9	13.6	15.5	16.9	15.2	16.6	16.1	17.9	16.1
2015	16	13.8	15.4	17	15.2	16.5	16.1	17.4	16.2
2016	16.1	13.9	15.5	17.1	15.2	16.4	16.3	17.4	16.3
2017	16.1	13.9	15.5	17.1	15.2	16.4	16.3	17.4	16.3
2018	16.1	13.9	15.5	17.1	15.2	16.4	16.3	17.4	16.3

Domestic General Government Health Expenditure % of GDP



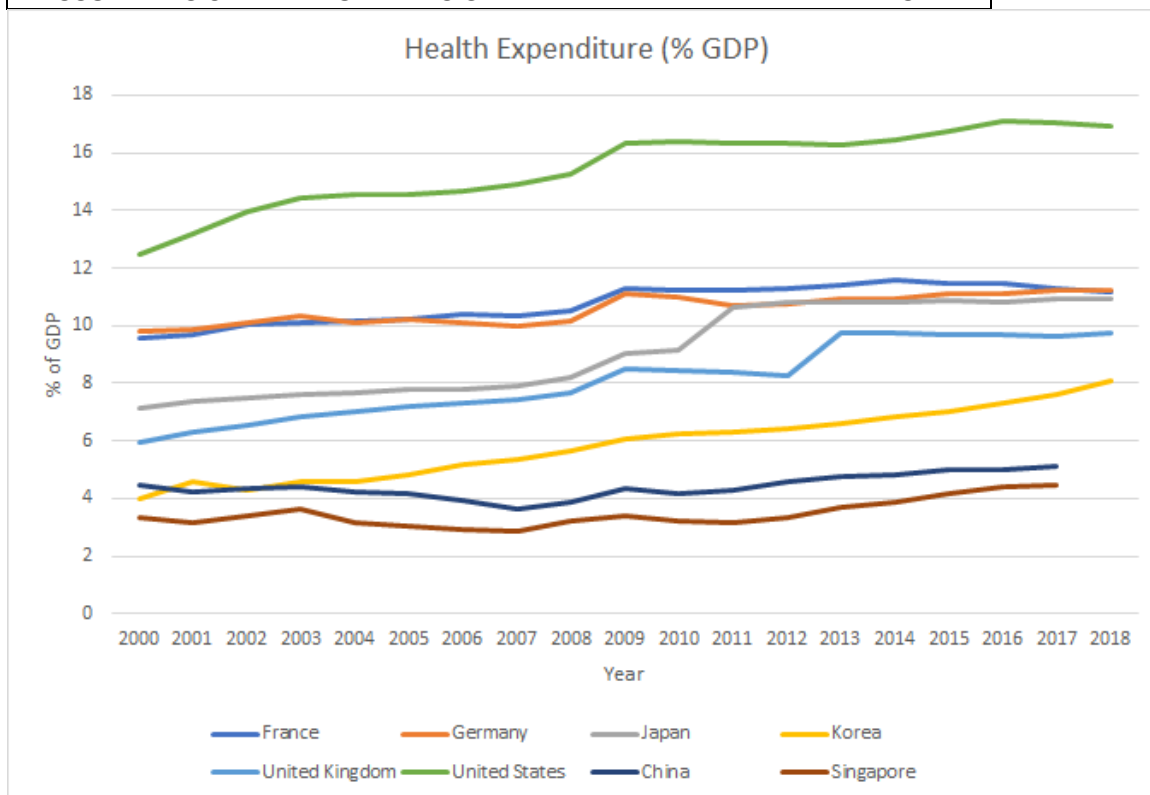
Source: United Nations Development Program

Year	China	France	Germany	Japan	S Korea	Singapore	UK	US
2017	2.9	8.7	8.7	9.2	4.4	2.1	7.6	8.6
2016	2.9	8.8	8.6	9.1	4.2	2.1	7.8	8.6
2015	2.9	8.8	8.5	9.2	4	2	7.7	8.5
2014	2.8	8.9	8.4	9.1	3.9	1.8	7.8	8.3
2013	2.7	8.7	8.3	9.1	3.8	1.5	7.8	8
2012	2.5	8.6	8.1	9.1	3.7	1.3	7	7.9
2011	2.3	8.5	8.1	8.9	3.7	1.2	7.1	7.9
2010	2.2	8.6	8.3	7.5	3.7	1.2	7.1	8
2009	2.1	8.7	8.4	7.4	3.6	1.2	7.2	7.9
2008	1.7	8.1	7.7	6.7	3.2	1.2	6.5	7.2
2007	1.4	8	7.5	6.4	3.1	1	6.2	6.9
2006	1.4	8	7.6	6.3	3	1	6.2	6.8
2005	1.4	8	7.8	6.3	2.7	1	6	6.6
2004	1.3	8	7.7	6.1	2.6	1	5.9	6.6
2003	1.2	7.9	8	6.1	2.6	1.3	5.6	6.5
2002	1.1	7.9	7.9	6	2.4	1.1	5.4	6.3

2001	1	7.7	7.7	6	2.5	0.9	5.1	5.9
2000	1	7.6	7.7	5.8	2	1.2	4.9	5.5

Source: United Nations Development Program

Country	United States	China	Japan	Germany	South Korea	Singapore
2014	8.3	3.1	8.6	8.7	4	2.1
2013	8	3	8.5	8.6	3.9	1.7
2012	8	2.9	8.4	8.4	3.9	1.5
2011	8.1	2.8	8.3	8.3	3.8	1.3
2010	8.1	2.7	7.9	8.6	3.9	1.4
2005	6.7	1.8	6.7	8	2.8	1
2000	5.7	1.8	6.1	8	2.1	1.2
1995	5.9	1.8	5.5	7.7	1.4	1.5

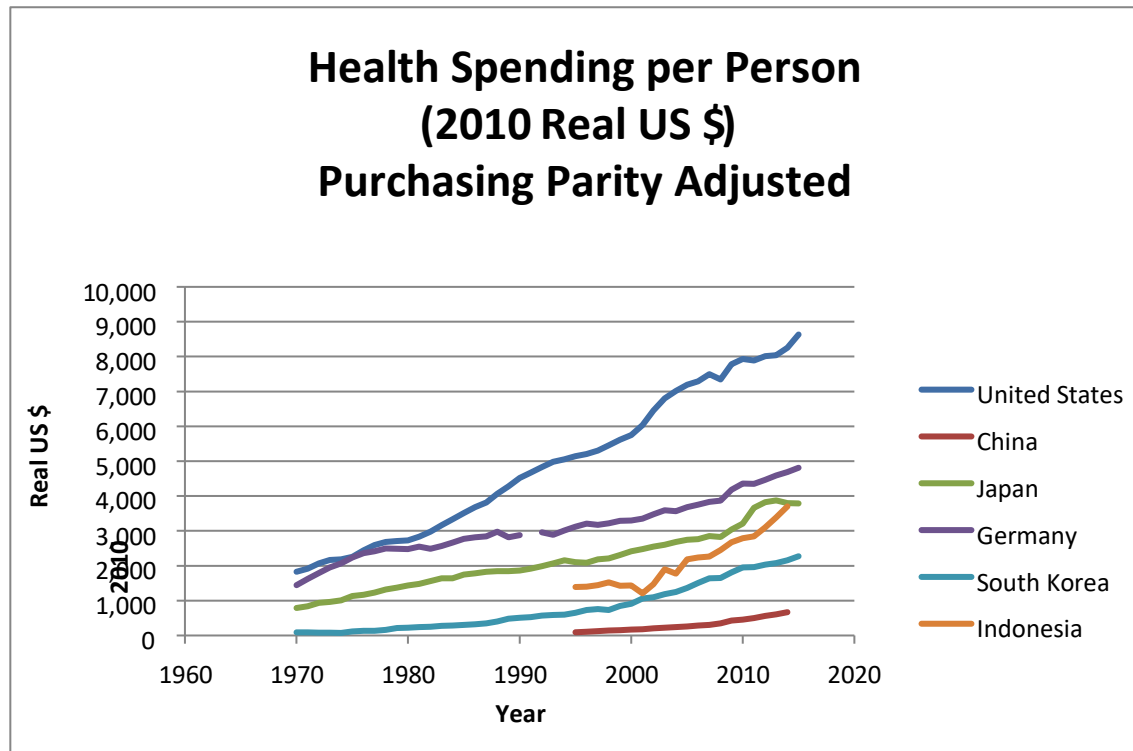


Year	France	Germany	Japan	Korea	UK	US	China
2000	9.584	9.837	7.151	3.999	5.972	12.542	4.487

2001	9.706	9.872	7.359	4.575	6.311	13.219	4.235
2002	10.022	10.117	7.473	4.315	6.568	14.007	4.369
2003	10.083	10.338	7.611	4.597	6.833	14.522	4.409
2004	10.164	10.08	7.657	4.58	7.036	14.61	4.281
2005	10.215	10.228	7.781	4.837	7.175	14.606	4.184
2006	10.398	10.117	7.808	5.18	7.308	14.703	3.95
2007	10.335	9.971	7.89	5.376	7.406	14.926	3.68
2008	10.514	10.157	8.2	5.676	7.646	15.301	3.886
2009	11.301	11.14	9.058	6.09	8.482	16.31	4.339
2010	11.239	11.005	9.157	6.222	8.434	16.382	4.194
2011	11.203	10.721	10.617	6.294	8.376	16.35	4.309
2012	11.315	10.777	10.791	6.437	8.286	16.329	4.57
2013	11.436	10.932	10.792	6.579	9.766	16.257	4.742
2014	11.571	10.96	10.832	6.821	9.757	16.443	4.817
2015	11.459	11.088	10.886	7.045	9.687	16.749	4.982
2016	11.479	11.131	10.826	7.325	9.699	17.121	5.019
2017	11.313	11.247	10.936	7.604	9.632	17.061	..
2018	11.177	11.229	10.918	8.102	9.768	16.937	..

World Health Organization (Singapore)

Consumer Price Index: Bureau of Labor Statistics

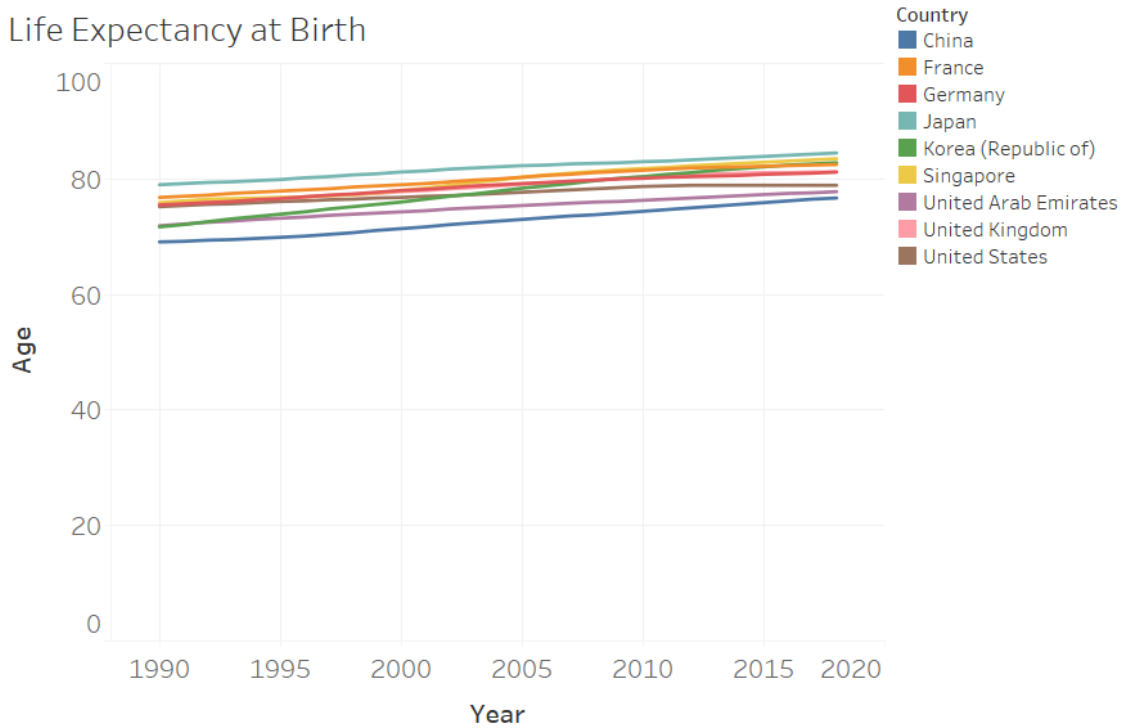


Sources: OECD Health Statistics

Year	United States	China	Japan	Germany	South Korea	Indonesia
2015	8,634		3,791	4,812	2,273	
2014	8,258	668	3,800	4,684	2,161	3,703
2013	8,042	611	3,875	4,593	2,076	3,389
2012	8,015	560	3,822	4,467	2,029	3,101
2011	7,885	497	3,666	4,352	1,959	2,840
2010	7,929	450	3,205	4,359	1,951	2,792
2009	7,780	425	3,036	4,182	1,813	2,677
2008	7,348	344	2,828	3,867	1,648	2,453
2007	7,497	307	2,851	3,832	1,640	2,261
2006	7,295	282	2,764	3,752	1,507	2,240
2005	7,192	262	2,749	3,679	1,361	2,185
2004	7,017	240	2,679	3,568	1,245	1,770
2003	6,802	224	2,607	3,596	1,183	1,903
2002	6,449	204	2,548	3,474	1,095	1,471
2001	6,031	179	2,481	3,353	1,059	1,208

2000	5,752	168	2,416	3,296	914	1,437
1999	5,613	154	2,310	3,286	847	1,426
Year	United States	China	Japan	Germany	South Korea	Indonesia
1998	5,457	140	2,213	3,214	732	1,526
1997	5,306	122	2,184	3,172	756	1,446
1996	5,204	106	2,085	3,210	727	1,404
1995	5,144	92	2,101	3,124	655	1,390
1994	5,057		2,158	3,011	598	
1993	4,982		2,070	2,892	585	
1992	4,832		1,991	2,961	569	
1991	4,667		1,914		527	
1990	4,515		1,867	2,878	510	
1989	4,276		1,843	2,820	481	
1988	4,067		1,848	2,980	400	
1987	3,813		1,824	2,845	348	
1986	3,679		1,781	2,813	325	
1985	3,509		1,746	2,775	305	
1984	3,331		1,642	2,668	284	
1983	3,169		1,641	2,565	276	
1982	2,973		1,556	2,483	251	
1981	2,836		1,482	2,547	239	
1980	2,732		1,436	2,481	221	
1979	2,711		1,369	2,483	216	
1978	2,684		1,317	2,498	159	
1977	2,596		1,229	2,415	136	
1976	2,439		1,167	2,365	130	
1975	2,256		1,132	2,235	116	
1974	2,185		1,010	2,069	73	
1973	2,162		965	1,951	81	
1972	2,066		933	1,788	83	
1971	1,918		841	1,618	86	
1970	1,828		789	1,443	91	

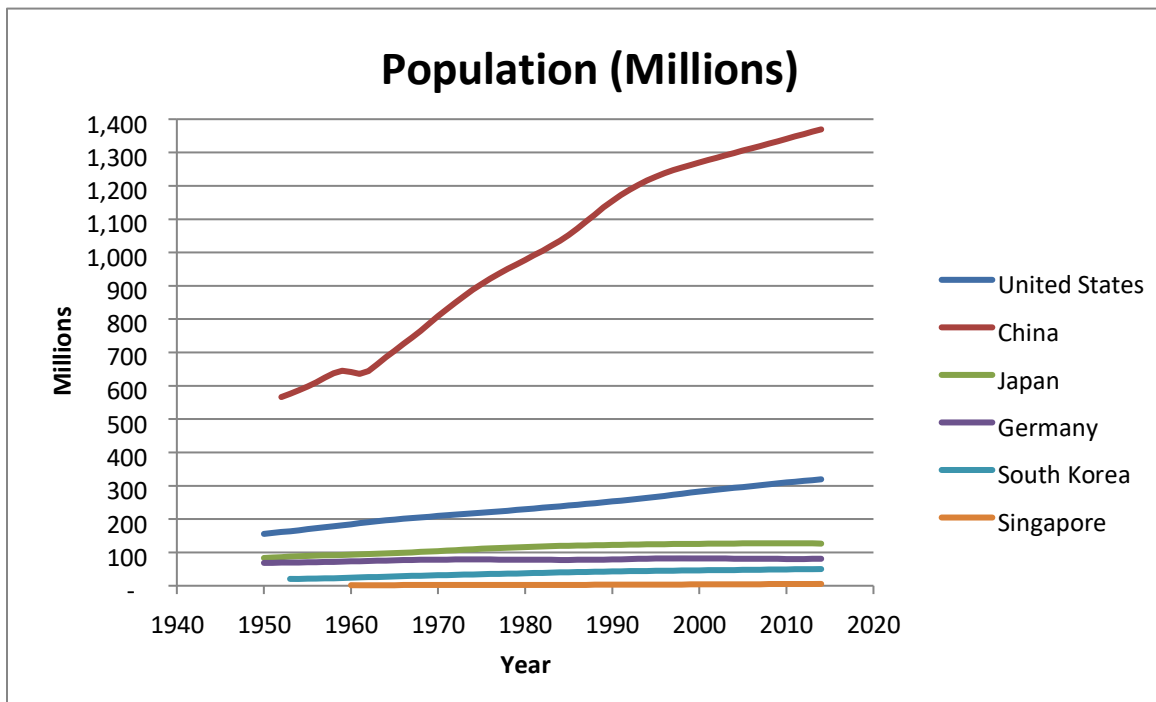
Life Expectancy at Birth



Source: United Nations Development Program

Year	China	France	Germany	Japan	S. Korea	Singapore	UAE	UK	US
1990	69.1	76.8	75.5	79	71.7	75.9	71.9	75.7	75.2
1991	69.2	77	75.7	79.2	72.1	76.2	72.2	75.9	75.4
1992	69.4	77.2	75.9	79.4	72.6	76.5	72.5	76.1	75.6
1993	69.5	77.5	76.1	79.5	73.1	76.6	72.7	76.3	75.7
1994	69.7	77.7	76.4	79.7	73.5	76.7	73	76.5	75.9
1995	69.9	77.9	76.6	79.9	73.9	76.8	73.2	76.7	76.1
1996	70.1	78.1	76.9	80.2	74.3	76.9	73.4	76.9	76.2
1997	70.4	78.3	77.2	80.4	74.8	77.1	73.7	77.1	76.4
1998	70.7	78.6	77.4	80.7	75.2	77.3	73.9	77.3	76.5
1999	71.1	78.8	77.7	80.9	75.6	77.6	74.1	77.5	76.7
2000	71.4	79	78	81.2	76	78	74.3	77.8	76.8
2001	71.7	79.2	78.2	81.4	76.5	78.4	74.5	78	77
2002	72.1	79.5	78.5	81.7	77	78.9	74.8	78.3	77.1
2003	72.4	79.8	78.8	81.9	77.4	79.4	75	78.5	77.3

2004	72.7	80	79	82.1	77.9	79.8	75.2	78.8	77.5
2005	73	80.3	79.2	82.3	78.4	80.3	75.4	79.1	77.7
2006	73.3	80.6	79.4	82.4	78.8	80.7	75.6	79.3	77.9
2007	73.6	80.8	79.6	82.6	79.2	81	75.8	79.6	78.1
2008	73.8	81.1	79.8	82.7	79.7	81.3	76	79.8	78.3
2009	74.1	81.3	80	82.8	80.1	81.6	76.1	80.1	78.5
2010	74.4	81.5	80.1	83	80.4	81.8	76.3	80.4	78.7
2011	74.7	81.7	80.3	83.1	80.8	82	76.5	80.6	78.8
2012	75	81.9	80.4	83.3	81.1	82.3	76.7	80.7	78.9
2013	75.3	82	80.5	83.5	81.5	82.5	76.9	80.9	78.9
2014	75.6	82.1	80.6	83.7	81.8	82.7	77.1	81	78.9
2015	75.9	82.2	80.8	83.9	82.1	82.9	77.3	81.1	78.9
2016	76.2	82.3	80.9	84.1	82.4	83.1	77.5	81.1	78.9
2017	76.5	82.4	81	84.3	82.6	83.3	77.6	81.2	78.9
2018	76.7	82.5	81.2	84.5	82.8	83.5	77.8	81.2	78.9



Source: Penn World Tables

Year	United States	China	Japan	Germany	South Korea	Singapore
2014	319	1,369	127	81	50	5.5
2013	317	1,363	127	81	50	5.4
2012	315	1,355	127	80	50	5.3
2011	312	1,348	127	80	49	5.2
2010	310	1,341	127	80	49	5.1
2009	307	1,334	127	81	49	5.0
2008	304	1,327	127	81	49	4.8
2007	302	1,320	127	81	48	4.7
2006	299	1,313	127	81	48	4.6
2005	296	1,306	127	81	48	4.5
2004	294	1,299	127	81	47	4.4
2003	291	1,291	127	82	47	4.3
2002	288	1,284	126	82	47	4.1
2001	286	1,277	126	82	46	4.0
2000	283	1,270	126	82	46	3.9
1999	280	1,263	125	82	46	3.8
1998	276	1,255	125	82	46	3.7
1997	273	1,247	125	82	45	3.7
1996	269	1,238	125	82	45	3.6
1995	266	1,228	124	82	45	3.5
1994	263	1,216	124	81	44	3.4

Year	United States	China	Japan	Germany	South Korea	Singapore
1993	261	1,203	124	81	44	3.3
1992	258	1,188	123	80	44	3.2
1991	255	1,172	123	79	43	3.1
1990	253	1,155	122	79	43	3.0
1989	250	1,135	122	79	43	2.9
1988	248	1,114	121	78	42	2.9
1987	245	1,093	121	78	42	2.8
1986	243	1,072	121	78	41	2.8
1985	241	1,053	120	78	41	2.7
1984	238	1,035	119	78	40	2.6
1983	236	1,020	119	78	39	2.6
1982	234	1,005	118	78	39	2.5
1981	232	992	117	78	38	2.5
1980	230	978	116	78	37	2.4

1979	227	964	115	78	37	2.4
1978	225	951	114	78	36	2.3
1977	223	937	113	79	36	2.3
1976	221	922	112	79	35	2.3
1975	219	906	111	79	35	2.3
1974	217	888	109	79	34	2.2
1973	215	869	108	79	33	2.2
1972	213	850	107	79	33	2.2
1971	211	829	105	79	32	2.1
1970	209	809	104	78	31	2.1
1969	207	787	103	78	31	2.0
1968	205	765	101	78	30	2.0
1967	203	744	100	77	29	2.0
1966	201	725	99	77	29	1.9
1965	199	705	98	76	28	1.9
1964	196	686	97	76	27	1.8
1963	193	664	96	75	27	1.8
1962	191	644	95	74	26	1.7
1961	188	635	94	74	25	1.7
1960	185	641	94	73	24	1.6
1959	182	645	93	72	23	
1958	179	637	92	72	23	
1957	176	624	91	71	22	
1956	173	610	90	71	21	
1955	170	598	89	71	21	
1954	167	586	88	70	21	
1953	164	576	87	70	21	
1952	161	566	86	69		

Year	United States	China	Japan	Germany	South Korea	Singapore
1951	158		85	69		

Health Care Structure, Select Countries

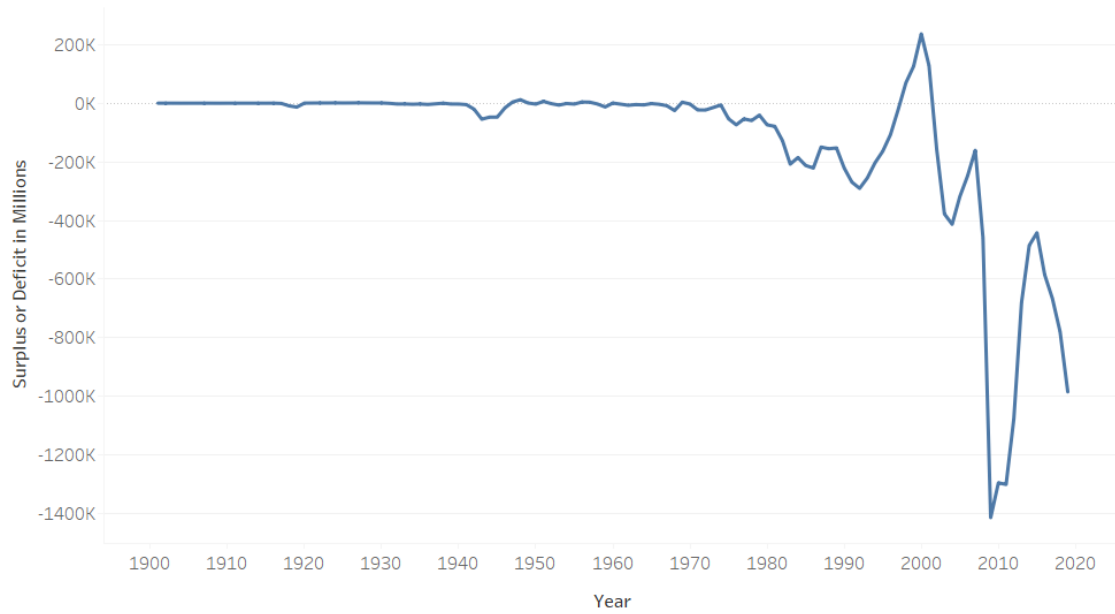
Country	Year Implemented	Plan	Source
United States	2010	Mandatory Health Coverage - Medicare/Medicaid for applicable groups. - Mandatory insurance - Low-income subsidies - State Level for profit insurance pools	The Commonwealth Fund at international.commonwealthfund.org/countries/united_states/
China	1980 in decentralized form	Universal Health Coverage - Public financed insurance - Local governments administer - Low income safety net	The Commonwealth Fund at international.commonwealthfund.org/countries/china/
Japan	1961	Universal Health Coverage - Subsidies to providers/insurers - Patients have minor co-pay - Fees set by government	The Commonwealth Fund at international.commonwealthfund.org/countries/japan/
Germany	1993 in its current form, but the system dates back to 1883	Mandatory Health Coverage - Mandatory insurance - Non-profit competing insurers - Pay-roll/unemployment deduction to pay system and safety-nets	The Commonwealth Fund at international.commonwealthfund.org/countries/germany/
South Korea	1977 with universal coverage by 1989	Universal Health Coverage - Single payer - Decentralized operations	Republic of Korea Health System Review, Health Systems in Transition, Vol. 5, No. 4, 2015, accessed at: www.wpro.who.int/asia_pacific_observatory/hits/series/korea_health_systems_review.pdf?ua=1

Singapore	1983	Universal Health Coverage - Income dependent subsidies - Mandatory savings - Price controls	The Commonwealth Fund at international.commonwealthfund.org/countries/singapore/
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Source: International Commonwealth Fund

Appendix E: Government Data

US Federal Surplus or Deficit



Source: StLouisFed

Year	Deficit in Millions
1901	63
1902	77
1903	45
1904	-43
1905	-23
1906	25
1907	87
1908	-57
1909	-89
1910	-18
1911	11
1912	3
1913	0

1914	0
1915	-63
1916	48
1917	-853
1918	-9032
1919	-13363
1920	291
1921	509
1922	736
1923	713
1924	963
1925	717
1926	865
1927	1155
1928	939
1929	734
1930	738
1931	-462
1932	-2735
1933	-2602
1934	-3586
1935	-2803
1936	-4304
1937	-2193
1938	-89
1939	-2846
1940	-2920
1941	-4941
1942	-20503
1943	-54554
1944	-47557

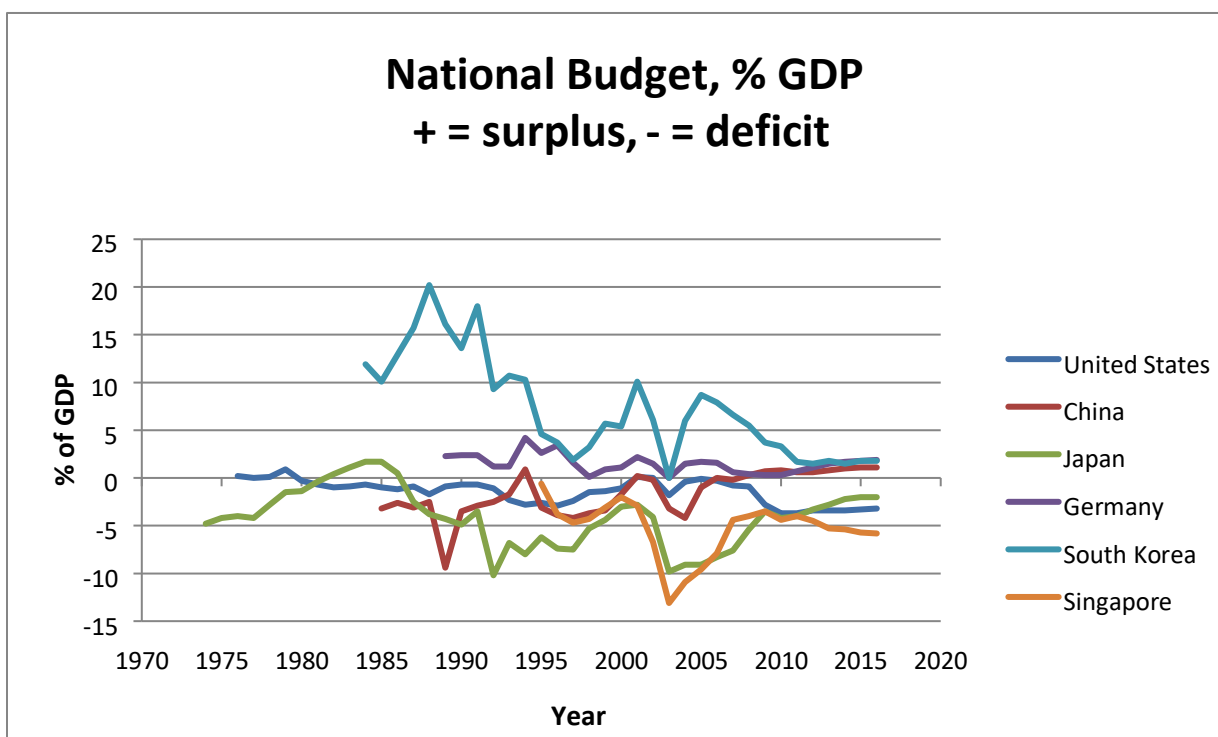
1945	-47553
1946	-15936
1947	4018
1948	11796
1949	580
1950	-3119
1951	6102
1952	-1519
1953	-6493
1954	-1154
1955	-2993
1956	3947
1957	3412
1958	-2769
1959	-12849
1960	301
1961	-3335
1962	-7146
1963	-4756
1964	-5915
1965	-1411
1966	-3698
1967	-8643
1968	-25161
1969	3242
1970	-2842
1971	-23033
1972	-23373
1973	-14908
1974	-6135
1975	-53242

1976	-73732
1977	-53659
1978	-59185
1979	-40726
1980	-73830
1981	-78968
1982	-127977
1983	-207802
1984	-185367
1985	-212308
1986	-221227
1987	-149730
1988	-155178
1989	-152639
1990	-221036
1991	-269238
1992	-290321
1993	-255051
1994	-203186
1995	-163952
1996	-107431
1997	-21884
1998	69270
1999	125610
2000	236241
2001	128236
2002	-157758
2003	-377585
2004	-412727
2005	-318346
2006	-248181

2007	-160701
2008	-458553
2009	-1412688
2010	-1294373
2011	-1299599
2012	-1076573
2013	-679775
2014	-484793
2015	-441960
2016	-584651
2017	-665446
2018	-779137
2019	-984155

Year	Budget as % of GDP	Year	Budget as % of GDP	Year	Budget as % of GDP
2016	-3.2	1993	-3.8	1970	-0.3
2015	-2.5	1992	-4.5	1969	0.3
2014	-2.8	1991	-4.4	1968	-2.8
2013	-4.1	1990	-3.7	1967	-1
2012	-6.8	1989	-2.7	1966	-0.5
2011	-8.5	1988	-3	1965	-0.2
2010	-8.7	1987	-3.1	1964	-0.9
2009	-9.8	1986	-4.9	1963	-0.8
2008	-3.1	1985	-5	1962	-1.2
2007	-1.1	1984	-4.7	1961	-0.6
2006	-1.8	1983	-5.9	1960	0.1
2005	-2.5	1982	-3.9	1959	-2.5
2004	-3.4	1981	-2.5	1958	-0.6
2003	-3.3	1980	-2.6	1957	0.7
2002	-1.5	1979	-1.6	1956	0.9
2001	1.2	1978	-2.6	1955	-0.7
2000	2.3	1977	-2.6	1954	-0.3
1999	1.3	1976	-4.1	1953	-1.7
1998	0.8	1975	-3.3	1952	-0.4

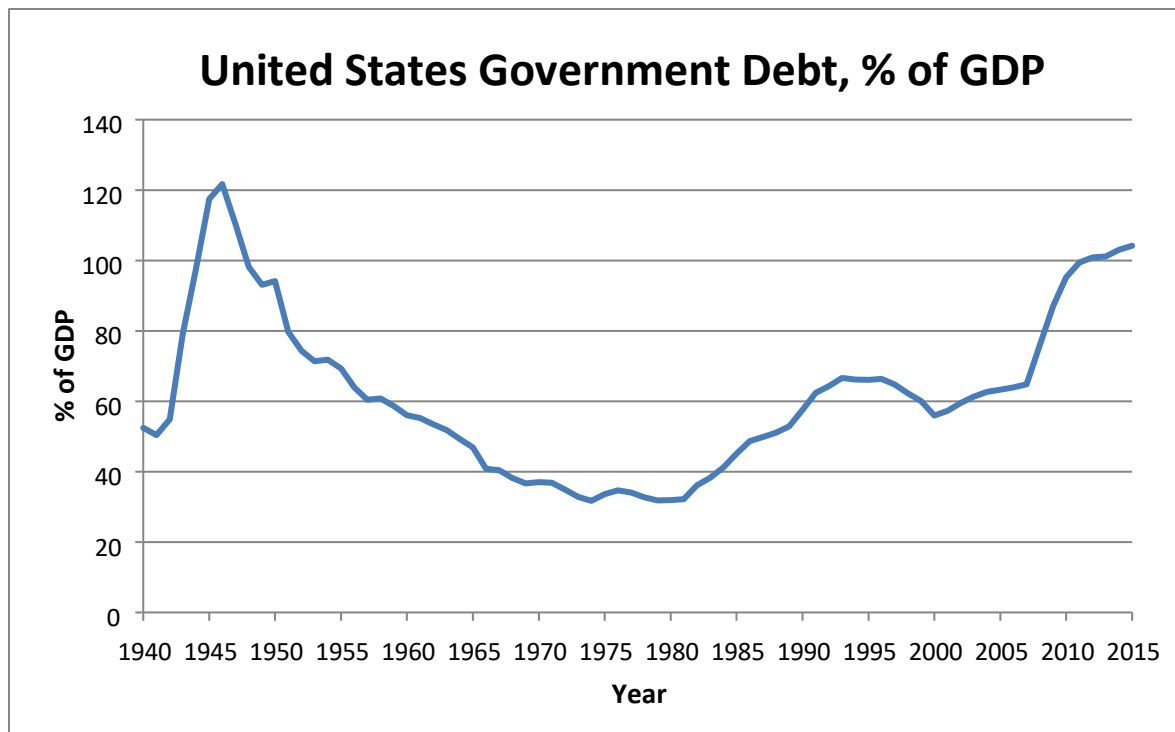
1997	-0.3	1974	-0.4	1951	1.9
1996	-1.3	1973	-1.1	1950	-1.1
1995	-2.2	1972	-1.9	1949	0.2
1994	-2.8	1971	-2.1	1948	4.5



Source: International Monetary Fund

Year	United States	China	Japan	Germany	South Korea	Singapore
2016	-3.2	1.1	-2	1.9	1.8	-5.8
2015	-3.3	1.1	-2	1.8	1.8	-5.7
2014	-3.4	1	-2.2	1.7	1.5	-5.4
2013	-3.4	0.8	-2.8	1.5	1.8	-5.3
2012	-3.4	0.6	-3.3	1.1	1.5	-4.5
2011	-3.7	0.6	-4	0.7	1.7	-4
2010	-3.7	0.8	-4.2	0.3	3.3	-4.4
2009	-2.8	0.7	-3.5	0.3	3.7	-3.5
2008	-0.9	0.3	-5.4	0.4	5.5	-4
2007	-0.8	-0.2	-7.6	0.6	6.6	-4.4
2006	-0.3	0	-8.3	1.6	7.9	-7.9
2005	-0.1	-1	-9.1	1.7	8.7	-9.6
2004	-0.4	-4.2	-9.1	1.5	6	-10.9

2003	-1.8	-3.2	-9.8	0	0	-13.1
2002	0	-0.2	-4.1	1.5	6.1	-6.7
2001	0.1	0.2	-2.8	2.2	10.1	-2.9
2000	-1.1	-1.7	-3	1.1	5.4	-2
1999	-1.4	-3.4	-4.4	0.9	5.7	-3.1
1998	-1.5	-3.7	-5.3	0.1	3.2	-4.3
1997	-2.4	-4.2	-7.5	1.6	1.9	-4.7
Year	United States	China	Japan	Germany	South Korea	Singapore
1996	-2.9	-3.9	-7.4	3.4	3.7	-3.8
1995	-2.6	-3.1	-6.2	2.6	4.6	-0.6
1994	-2.8	0.9	-8	4.2	10.3	
1993	-2.3	-1.7	-6.8	1.2	10.7	
1992	-1.1	-2.5	-10.2	1.2	9.3	
1991	-0.7	-2.9	-3.5	2.4	18	
1990	-0.7	-3.5	-4.9	2.4	13.6	
1989	-0.9	-9.4	-4.3	2.3	16.1	
1988	-1.7	-2.5	-3.8		20.2	
1987	-0.9	-3.1	-2.5		15.7	
1986	-1.2	-2.6	0.5		12.9	
1985	-1	-3.2	1.7		10.1	
1984	-0.7		1.7		11.9	
1983	-0.9		1.1			
1982	-1		0.4			
1981	-0.7		-0.4			
1980	-0.3		-1.4			
1979	0.9		-1.5			
1978	0.1		-2.8			
1977	0		-4.2			
1976	0.2		-4			
1975			-4.2			
1974			-4.8			



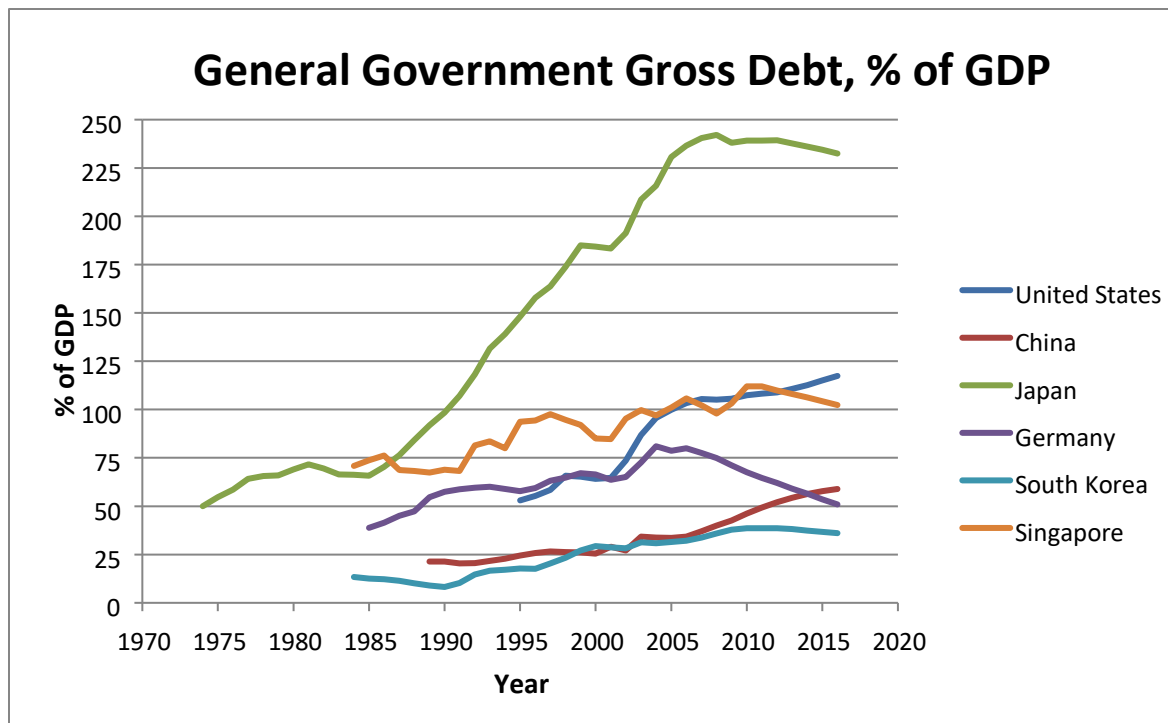
Source: US Bureau of Public Debt

Year	Debt as % of GDP
2015	104.17
2014	102.98
2013	101.17
2012	100.83
2011	99.4
2010	95.2
2009	87.1
2008	76
2007	64.8
2006	63.9
2005	63.3
2004	62.7
2003	61.3
2002	59.5
2001	57.3
2000	55.9
1999	60.1
1998	62.2
1997	64.7

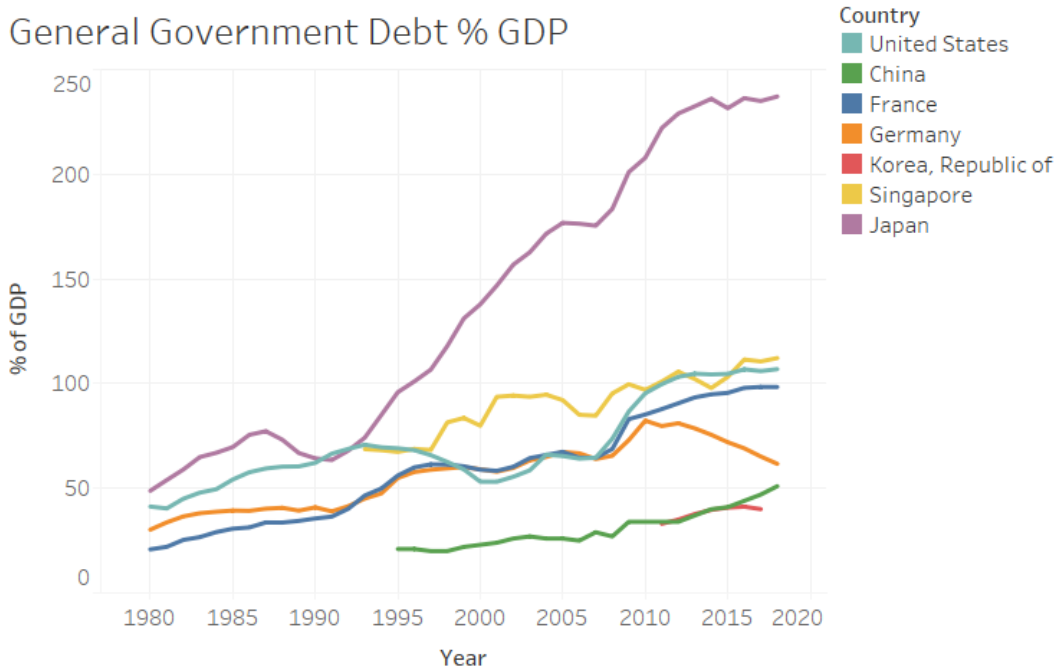
1996	66.3
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Year	Debt as % of GDP
1995	66.1
1994	66.2
1993	66.6
1992	64.3
1991	62.4
1990	57.6
1989	52.9
1988	51.1
1987	49.8
1986	48.7
1985	45.1
1984	41.2
1983	38.3
1982	36.1
1981	32.2
1980	31.9
1979	31.8
1978	32.7
1977	34.1
1976	34.7
1975	33.6
1974	31.7
1973	32.8
1972	34.9
1971	36.8
1970	37
1969	36.7
1968	38.2
1967	40.4
1966	40.8
1965	46.9
1964	49.3
1963	51.8
1962	53.4
1961	55.2
1960	56
1959	58.6

1958	60.8
1957	60.4
1956	63.9
1955	69.3
1954	71.8
Year	Debt as % of GDP
1953	71.4
1952	74.3
1951	79.7
1950	94.1
1949	93.1
1948	98.2
1947	110.3
1946	121.7
1945	117.5
1944	97.6
1943	79.1
1942	54.9
1941	50.4
1940	52.4



Source: International Monetary Fund



Year	China	France	Germany	Korea	United States	Singapore	Japan
1980		20.82918	30.24545		41.26846		48.81254

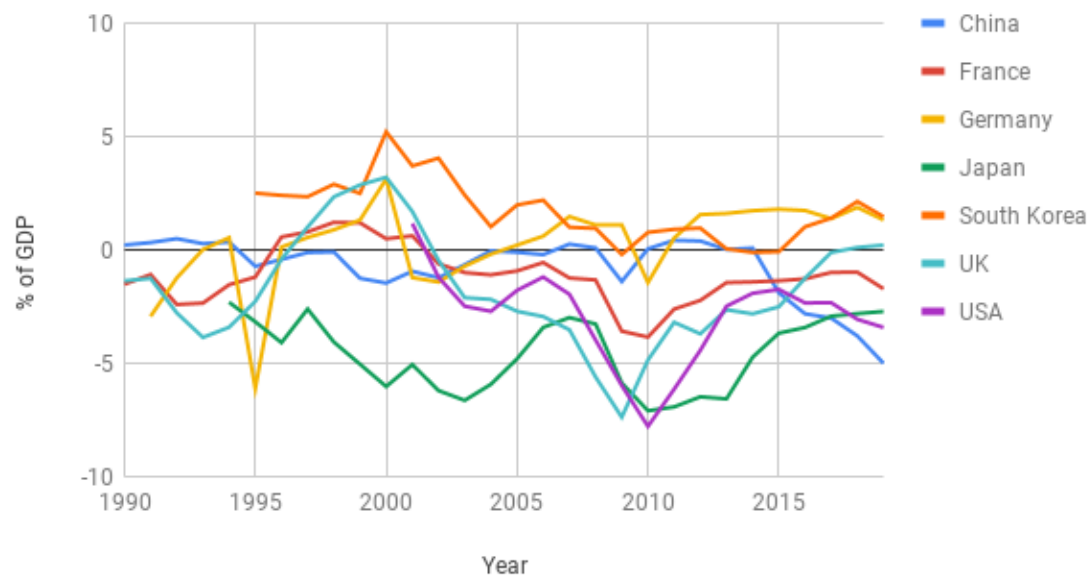
1981		22.03986	33.73686		40.39036		53.95154
1982		25.35884	36.57168		45.01271		58.96246
1983		26.68667	38.10485		47.92034		64.91773
1984		29.09353	38.79981		49.56891		66.96738
1985		30.69861	39.37305		54.20558		69.6833
1986		31.30386	39.23041		57.66394		75.54472
1987		33.68058	40.255		59.46612		77.26882
1988		33.63543	40.6734		60.33823		73.21001
1989		34.43915	39.33696		60.45595		66.84701
1990		35.58459	40.88555		62.16273		64.30419
1991		36.47506	38.98455		66.54563		63.49226
1992		40.22165	41.45371		68.80935		67.99364
1993		46.55382	45.09535		70.79679	68.7	74.19149
1994		49.88698	47.53705		69.57946	68.2	84.99241
1995	21.44724	56.10401	54.90249		69.11026	67.4	95.89772
1996	21.25871	59.99524	57.79393		68.23446	68.8	101.0344
1997	20.4482	61.42591	58.86663		65.83958	68.3	106.6766
1998	20.49632	61.35087	59.53495		62.60391	81.5	117.941
1999	21.68754	60.49969	60.13984		59.03423	83.6	131.1204
2000	22.80893	58.88062	59.06742		53.16201	79.9	137.8909
2001	24.38424	58.34092	57.93905		53.1464	93.7	146.8321
2002	25.71095	60.25838	59.70771		55.50444	94.3	156.8242
2003	26.57401	64.4154	63.31525		58.585	93.7	162.7307
2004	26.16836	65.93823	64.9977		66.0786	94.7	171.6598
2005	26.09848	67.38188	67.35976		65.43516	92.1	176.7835
2006	25.38195	64.61052	66.72036		64.16701	85.1	176.3853
2007	29.03554	64.53723	64.01216		64.63633	84.7	175.4262
2008	27.0002	68.77704	65.54257		73.66551	95.3	183.4157
2009	34.34641	83.03975	73.01231		86.69069	99.7	201.0433
2010	33.74233	85.25582	82.3065		95.39652	97	207.8515

2011	33.63761	87.83654	79.72902	33.06082	99.73822	101	222.0871
2012	34.26916	90.60209	81.05474	35.03938	103.2162	105.7	229.0078
2013	36.99692	93.41159	78.63621	37.68908	104.7501	102.2	232.4692
2014	39.91973	94.88944	75.57072	39.70564	104.4079	97.9	236.0688
2015	41.0665	95.58176	72.01061	40.7814	104.6503	103.2	231.5507
2016	44.17692	97.95764	69.10727	41.21786	106.8188	111.5	236.3346
2017	46.78666	98.4156	65.18963	40.05179	105.9884	110.6	234.9879
2018	50.64045	98.39403	61.6909		106.9086	112.2	237.1296

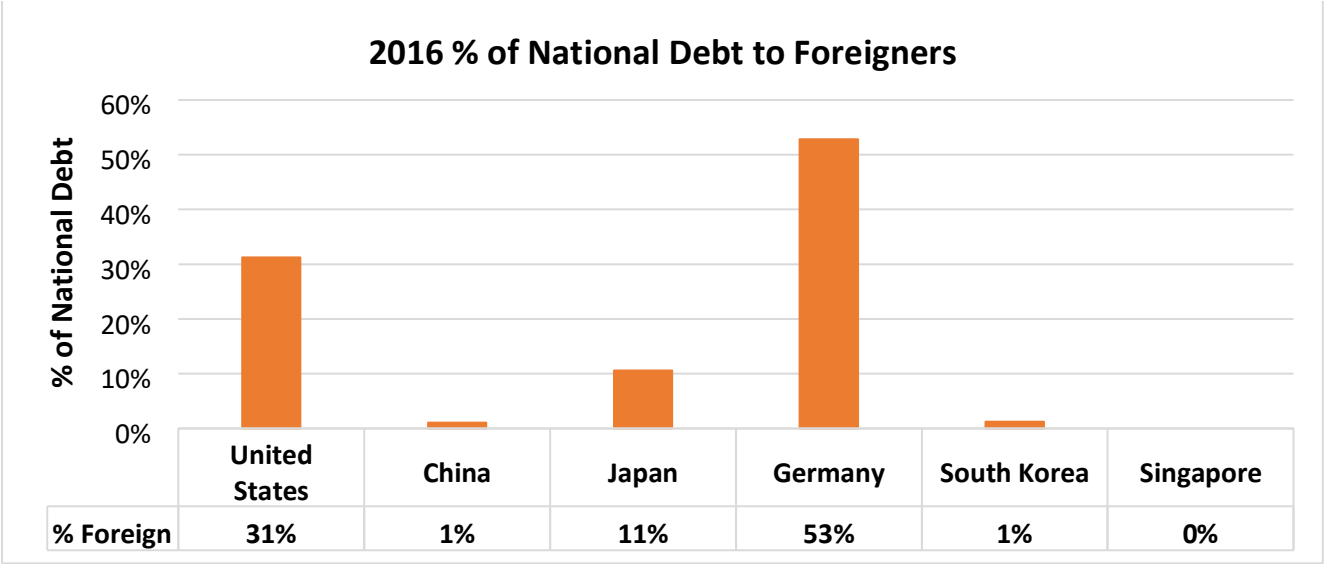
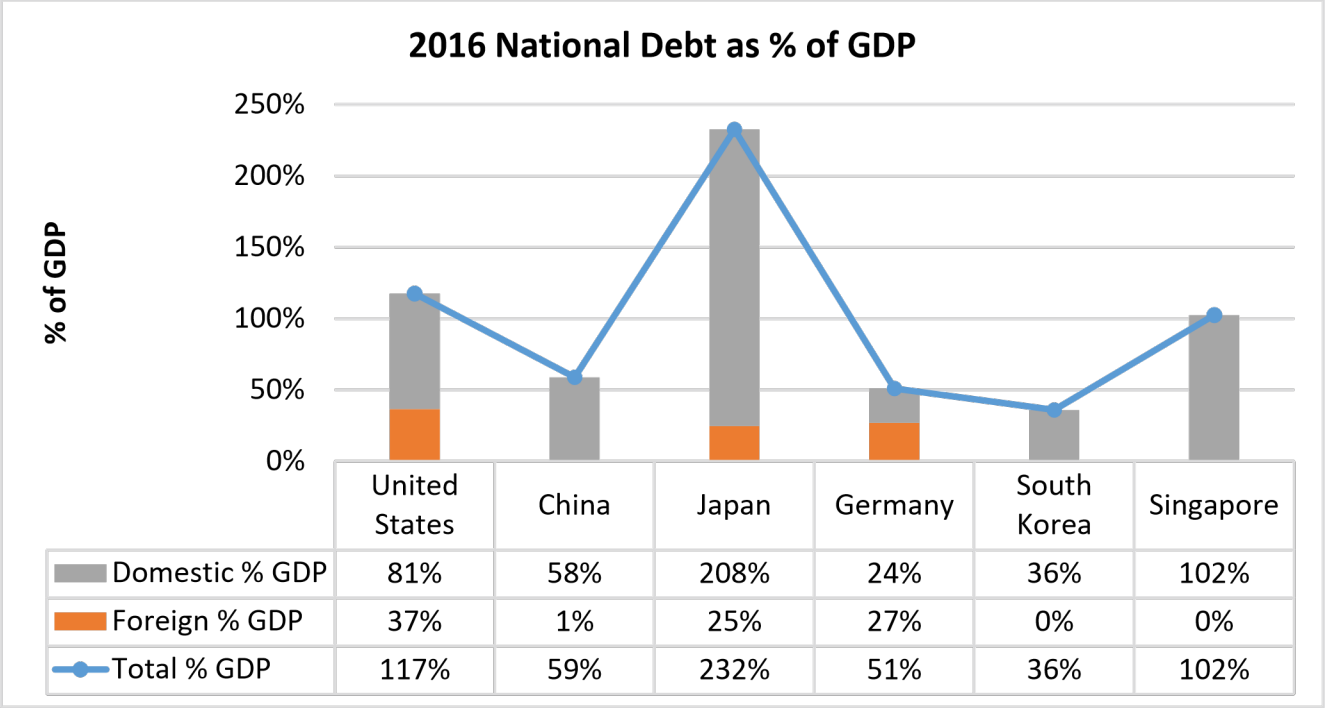
Year	United States	China	Japan	Germany	South Korea	Singapore
2016	117.4	58.9	232.4	50.9	36	102.4
2015	115.1	57.7	234.4	53.6	36.7	104.3
2014	112.7	56.3	236.1	56.4	37.4	106.2
2013	110.6	54.4	237.7	59.1	38.2	108.1
Year	United States	China	Japan	Germany	South Korea	Singapore
2012	108.9	52	239.4	62	38.6	109.8
2011	108.3	49.3	239.2	64.7	38.6	112
2010	107.4	46.2	239.2	67.6	38.6	112
2009	105.6	42.6	238	71.2	37.8	103.2
2008	105.2	39.9	242.1	74.9	35.9	97.9
2007	105.4	37	240.5	77.5	33.8	102.2
2006	103.4	34.3	236.6	79.9	32.1	105.7
2005	99.9	33.6	230.6	78.7	31.5	101
2004	95.7	33.7	215.9	81	30.8	97
2003	86.9	34.3	208.6	72.6	31.4	99.7
2002	73.6	27	191.3	65.1	28.2	95.3
2001	64.7	29	183.3	63.7	28.7	84.7
2000	64.2	25.4	184.3	66.5	29.3	85.1
1999	65.3	26.1	184.9	67	27	92.1
1998	65.8	26.2	173.8	64.8	23.3	94.7
1997	58.5	26.6	163.7	63.1	20.4	97.6
1996	55.4	25.7	157.8	59.4	17.6	94.3
1995	53	24.4	148	57.7	17.7	93.7
1994		22.8	139	58.9	17.1	79.9
1993		21.7	131.5	60	16.7	83.6
1992		20.5	118.1	59.5	14.7	81.5
1991		20.4	107	58.7	10.2	68.3
1990		21.3	98.5	57.5	8.2	68.8

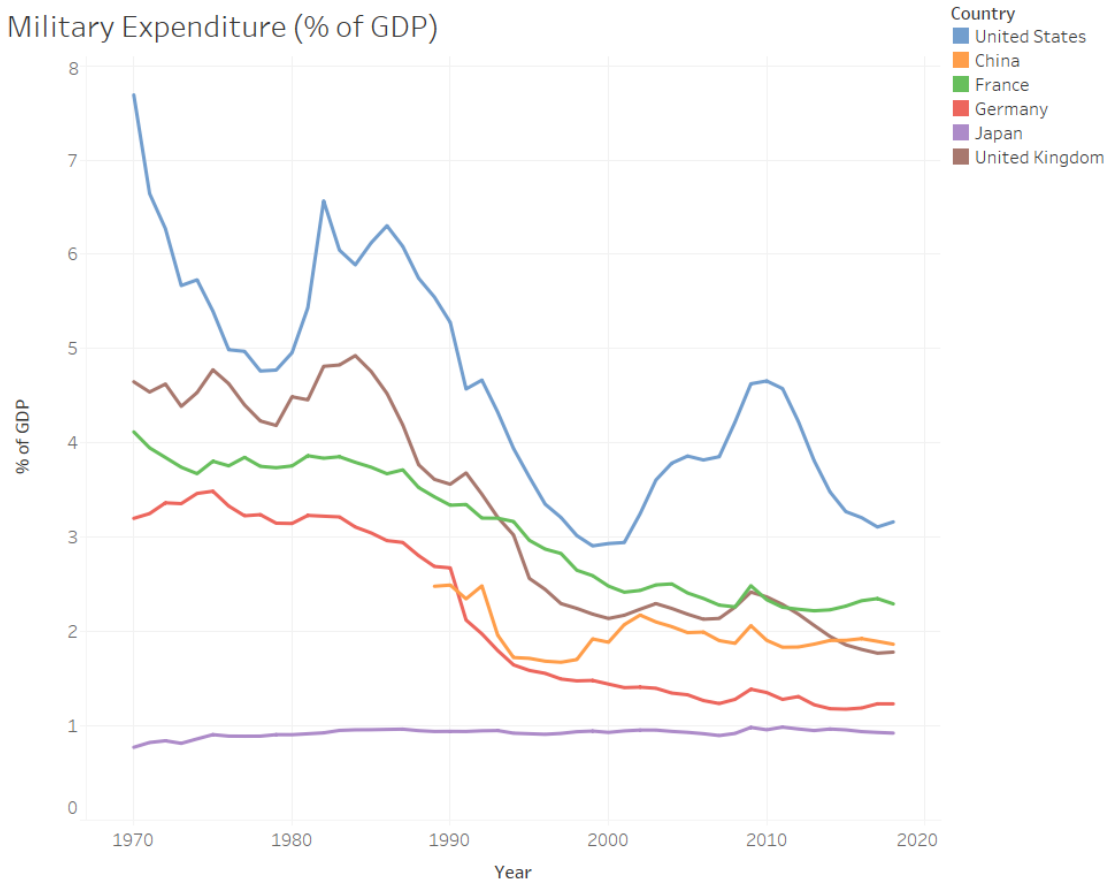
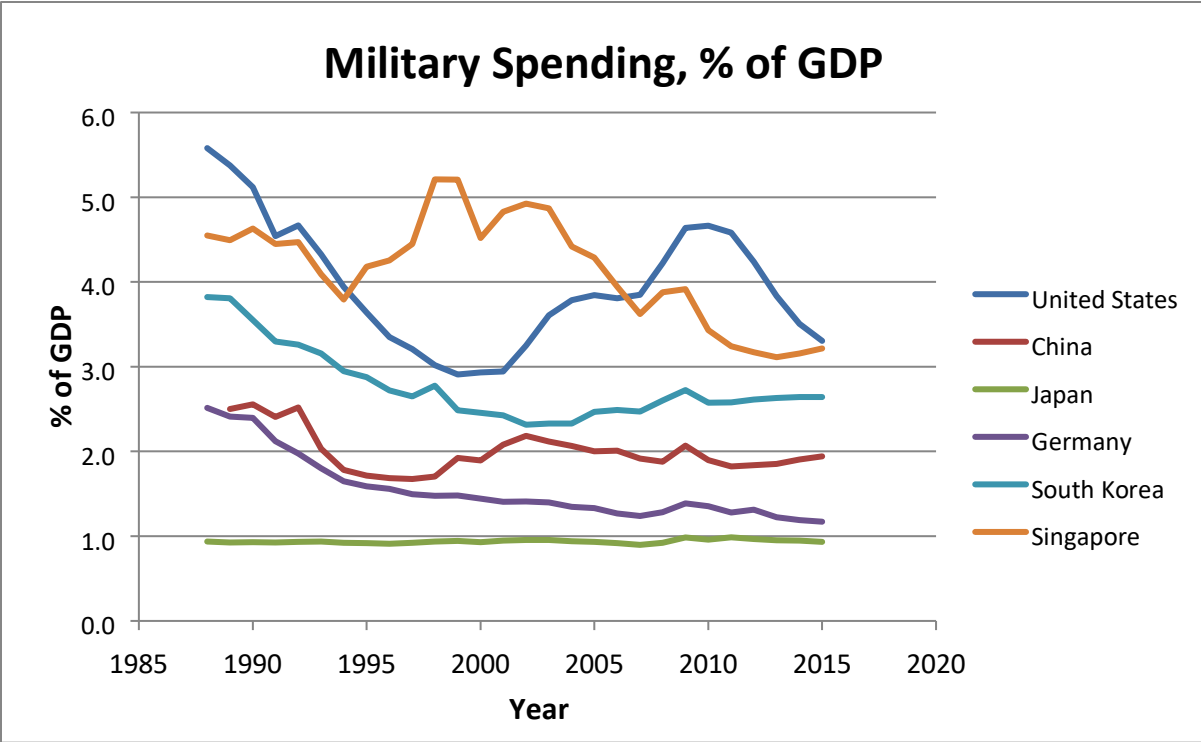
1989	21.4	91.9	54.7	8.9	67.4
1988		84.2	47.3	10.1	68.2
1987		76.4	45	11.4	68.7
1986		70.4	41.4	12.2	76.2
1985		65.7	38.8	12.5	73.7
1984		66.3		13.4	70.9
1983		66.5			
1982		69.5			
1981		71.6			
1980		69.1			
1979		65.9			
1978		65.6			
1977		64.1			
1976		58.6			
1975		54.7			
1974		50			

National Debt % of GDP



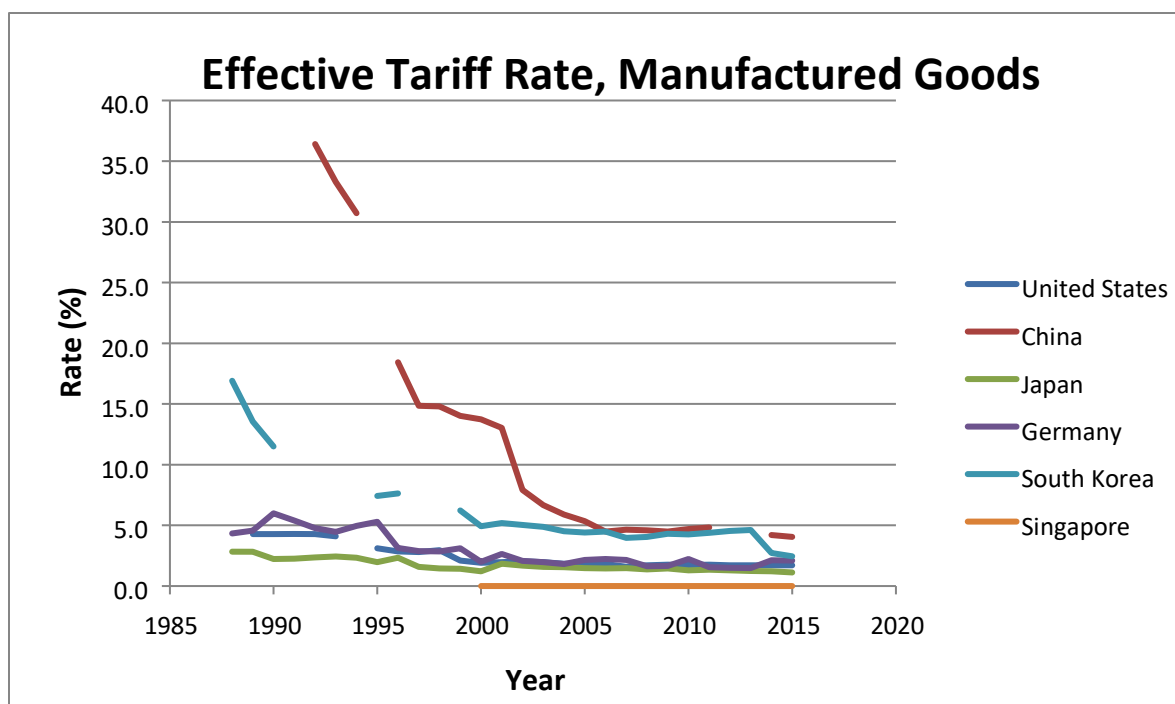
Source: CEIC





Source: World Development indicators, World Bank

Year	United States	China	Japan	Germany	South Korea	Singapore
2015	3.3	1.9	0.9	1.2	2.6	3.2
2014	3.5	1.9	0.9	1.2	2.6	3.2
2013	3.8	1.9	1.0	1.2	2.6	3.1
2012	4.2	1.8	1.0	1.3	2.6	3.2
2011	4.6	1.8	1.0	1.3	2.6	3.2
2010	4.7	1.9	1.0	1.4	2.6	3.4
2009	4.6	2.1	1.0	1.4	2.7	3.9
2008	4.2	1.9	0.9	1.3	2.6	3.9
2007	3.8	1.9	0.9	1.2	2.5	3.6
2006	3.8	2.0	0.9	1.3	2.5	3.9
2005	3.8	2.0	0.9	1.3	2.5	4.3
2004	3.8	2.1	0.9	1.3	2.3	4.4
2003	3.6	2.1	1.0	1.4	2.3	4.9
2002	3.2	2.2	1.0	1.4	2.3	4.9
2001	2.9	2.1	0.9	1.4	2.4	4.8
2000	2.9	1.9	0.9	1.4	2.5	4.5
1999	2.9	1.9	0.9	1.5	2.5	5.2
1998	3.0	1.7	0.9	1.5	2.8	5.2
Year	United States	China	Japan	Germany	South Korea	Singapore
1997	3.2	1.7	0.9	1.5	2.6	4.5
1996	3.4	1.7	0.9	1.6	2.7	4.3
1995	3.6	1.7	0.9	1.6	2.9	4.2
1994	3.9	1.8	0.9	1.6	2.9	3.8
1993	4.3	2.0	0.9	1.8	3.2	4.1
1992	4.7	2.5	0.9	2.0	3.3	4.5
1991	4.5	2.4	0.9	2.1	3.3	4.4
1990	5.1	2.6	0.9	2.4	3.6	4.6
1989	5.4	2.5	0.9	2.4	3.8	4.5
1988	5.6		0.9	2.5	3.8	4.5

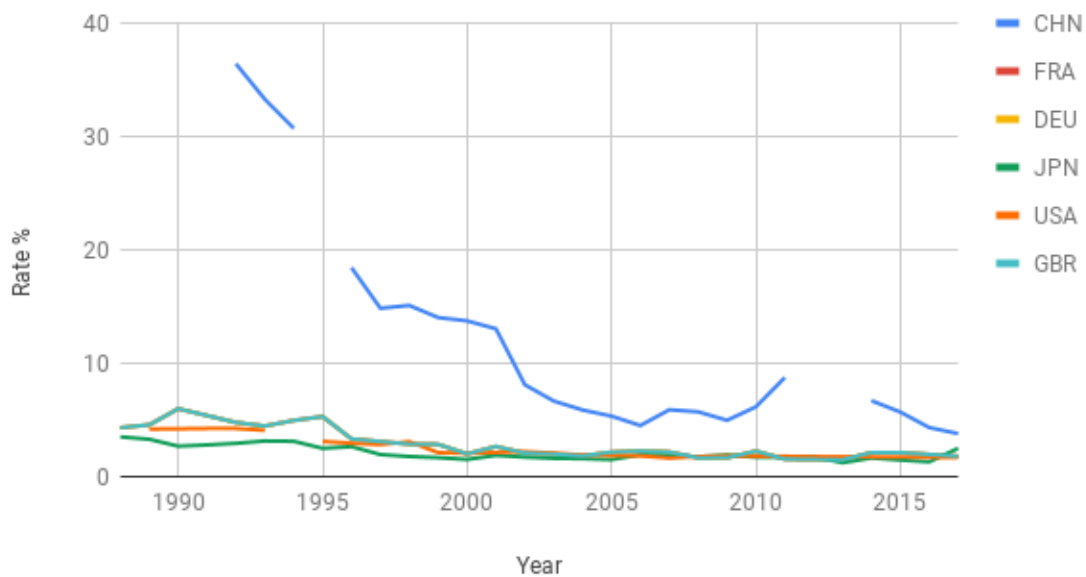


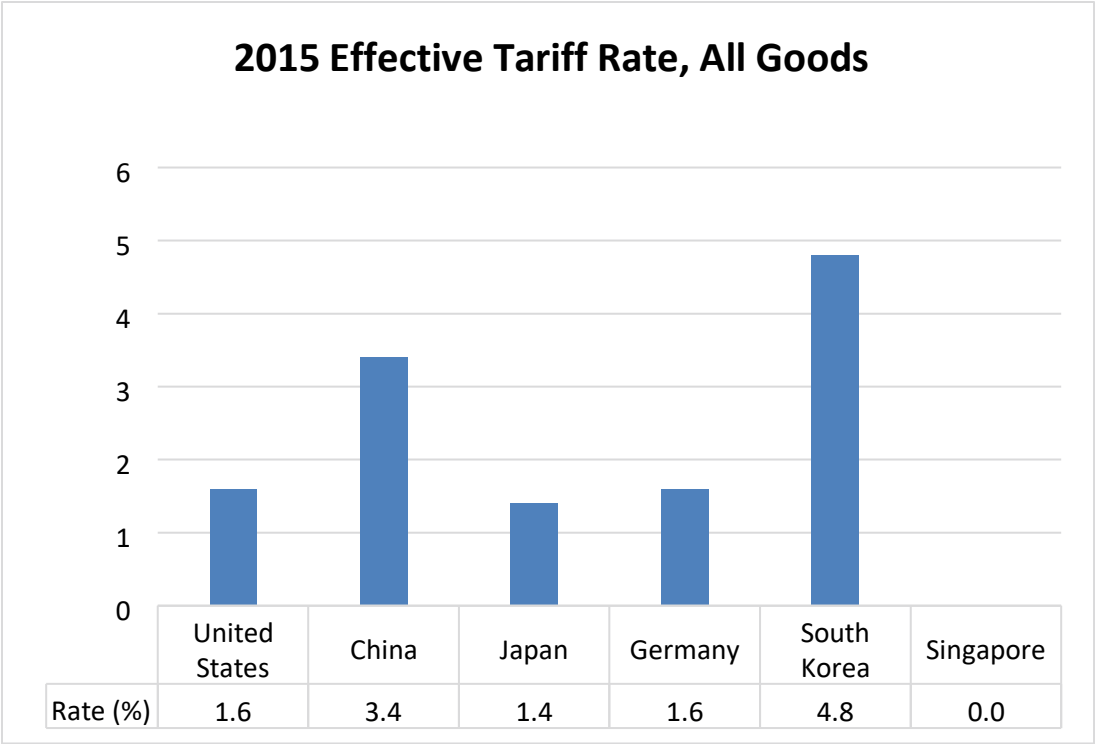
Source: World Development Indicators, World Bank

Year	United States	China	Japan	Germany	South Korea	Singapore
2015	1.7	4.1	1.1	2.1	2.5	0.0
2014	1.7	4.2	1.2	2.1	2.7	0.0
2013	1.7		1.2	1.5	4.6	0.0
2012	1.7		1.3	1.5	4.5	0.0
2011	1.8	4.8	1.4	1.5	4.4	0.0
2010	1.7	4.7	1.3	2.2	4.3	0.0
2009	1.8	4.5	1.5	1.7	4.3	0.0
Year	United States	China	Japan	Germany	South Korea	Singapore
2008	1.7	4.6	1.4	1.6	4.0	0.0
2007	1.6	4.7	1.5	2.2	4.0	0.0
2006	1.8	4.5	1.5	2.2	4.5	0.0
2005	1.8	5.3	1.5	2.2	4.4	0.0
2004	1.8	5.9	1.6	1.8	4.5	0.0
2003	2.0	6.7	1.6	2.0	4.9	0.0
2002	2.0	7.9	1.7	2.1	5.0	0.0
2001	2.0	13.0	1.8	2.6	5.2	0.0
2000	1.9	13.7	1.2	2.0	4.9	0.0
1999	2.1	14.0	1.4	3.1	6.2	
1998	3.0	14.8	1.5	2.9		
1997	2.8	14.9	1.6	2.9		

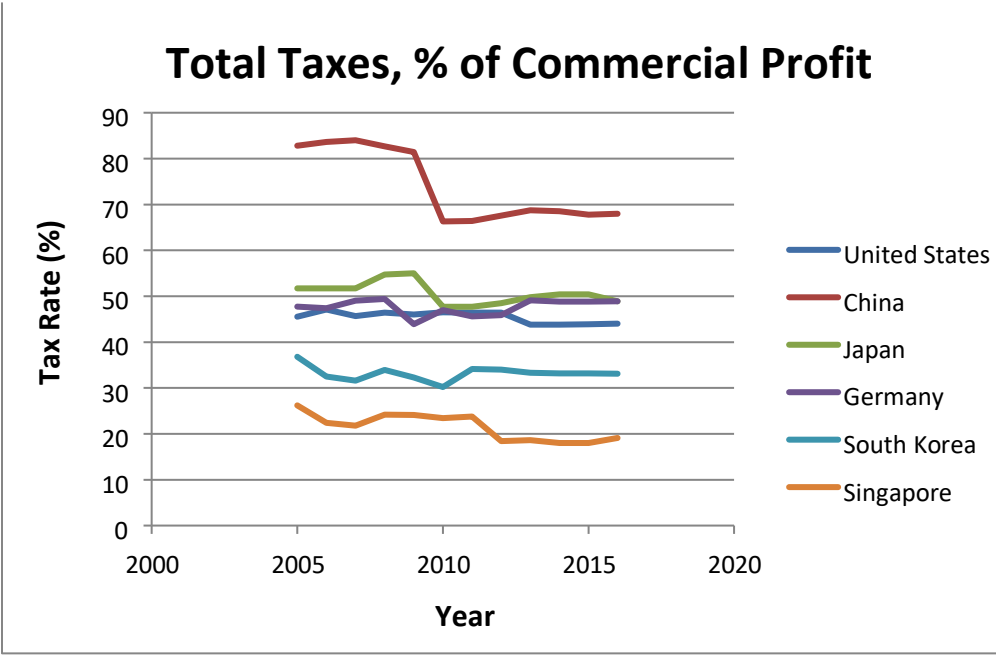
1996	2.9	18.4	2.3	3.1	7.6	
1995	3.1		2.0	5.3	7.4	0.0
1994		30.7	2.3	5.0		
1993	4.1	33.3	2.4	4.5		
1992	4.3	36.4	2.4	4.8		
					9.9	
1991	4.3		2.3	5.4		
1990	4.3		2.2	6.0		
					11.5	
1989	4.3		2.8	4.6	13.5	0.6
1988			2.8	4.3	16.9	

Effective Tariff Rate, Manufactured Goods





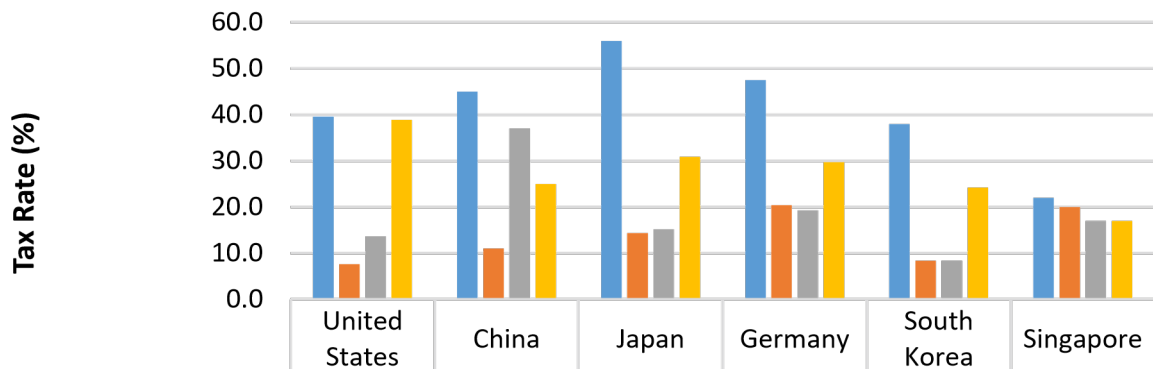
Source: World Development Indicators, World Bank



Source: World Bank, Doing Business Project

Year	United States	China	Japan	Germany	South Korea	Singapore
2016	44	68	48.9	48.9	33.1	19.1
2015	43.9	67.8	50.4	48.8	33.2	18
2014	43.8	68.5	50.4	48.8	33.2	18
2013	43.8	68.7	49.8	49.1	33.3	18.6
2012	46.4	67.6	48.5	45.9	34	18.4
2011	46.4	66.4	47.7	45.6	34.1	23.8
2010	46.5	66.3	47.7	47	30.2	23.4
2009	46	81.4	55	43.9	32.3	24.1
2008	46.4	82.7	54.7	49.4	33.9	24.2
2007	45.7	84	51.7	49	31.6	21.8
2006	47.1	83.6	51.7	47.4	32.5	22.4
2005	45.5	82.8	51.7	47.7	36.8	26.2

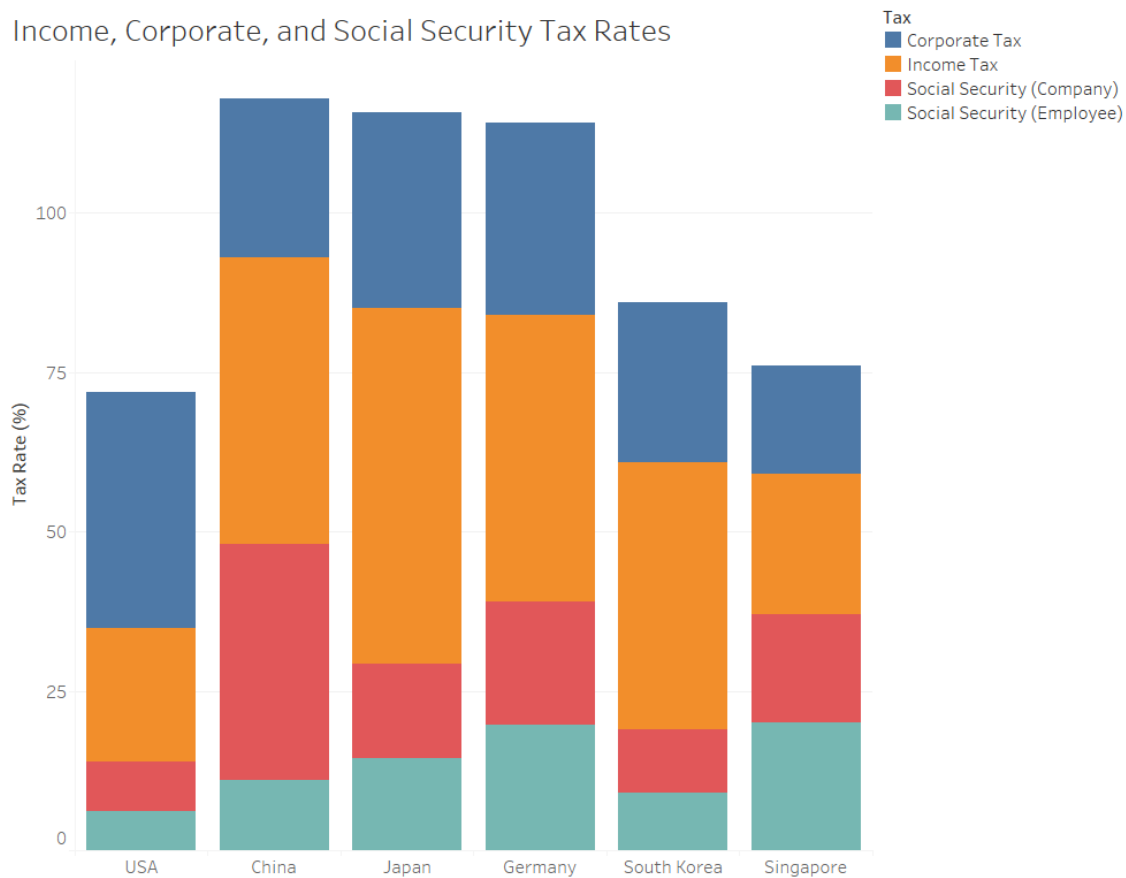
Income, Corporate, and Social Security Tax Rates, 2016



Income	39.6	45.0	56.0	47.5	38.0	22.0
Social Security, Employee	7.7	11.0	14.4	20.4	8.4	20.0
Social Security, Company	13.7	37.0	15.2	19.3	8.4	17.0
Corporate	38.9	25.0	30.9	29.7	24.2	17.0

Source: Trading Economics

Income, Corporate, and Social Security Tax Rates



As of May, 2020	USA	China	Japan	Germany	South Korea	Singapore
Corporate Tax	37	25	30.62	30	25	17
Social Security (Company)	7.65	37	14.75	19.44	9.96	17
Social Security (Employee)	6.2	11	14.45	19.63	8.98	20
Income Tax	21	45	55.95	45	42	22

Source: Trading Economics

Appendix F: Industrial Data

Manufacturing Labor Costs (2015)

Item	Value	Units
Total Labor Costs	1,025,232	Millions of 2015 \$
Employees	12,655	Thousands
Costs per Employee	81,014	2015 \$
Producer Price Index, Manufacturing	188.5	2015
Producer Price Index, Manufacturing	174.7	2010
Cost per Employee	75,083	2010 \$

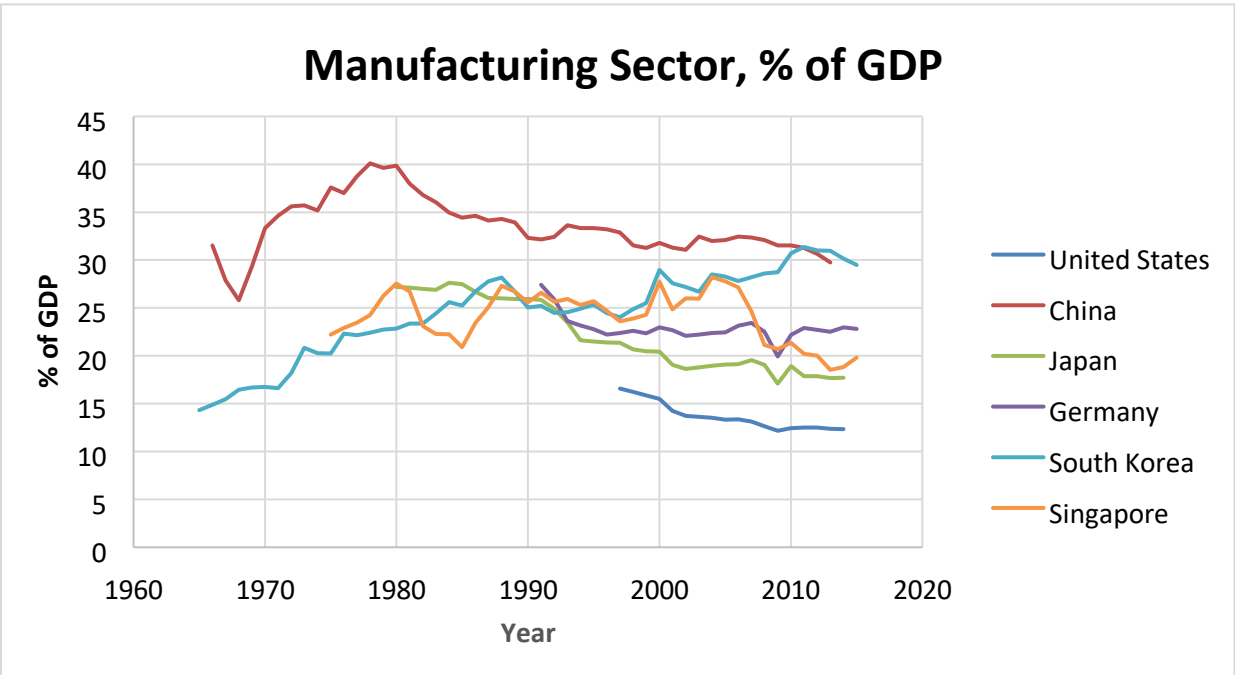
Sources: The Conference Board, International Labor Comparisons;
Bureau of Labor Statistics for PPI

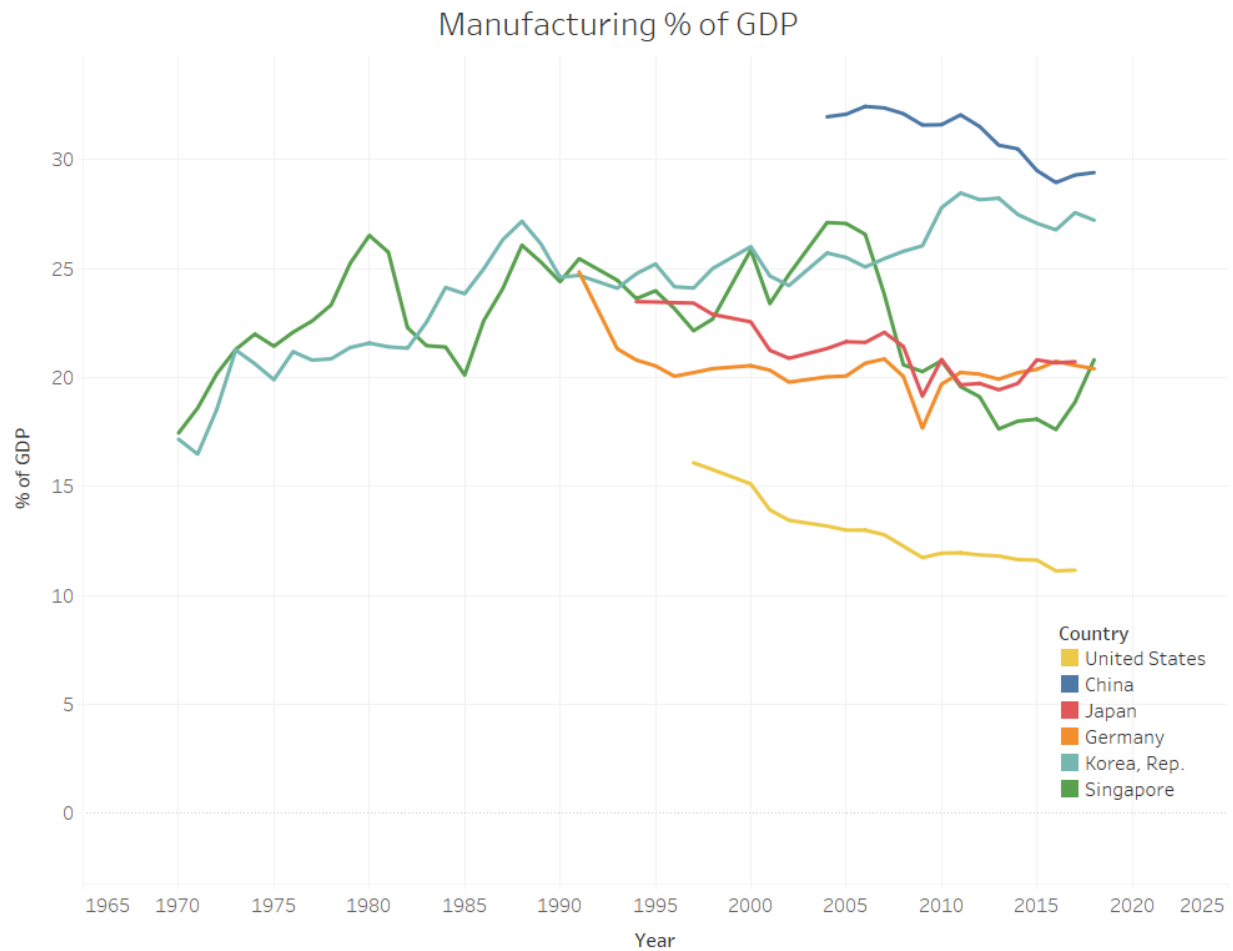
Manufacturing Labor Costs (2019)

Item	Value	Units	Year
Total Labor Costs	1123.479	Billions of Current Dollars	2018
Employees	12852	thousands of persons	Feb 2020
Costs per Employee	80158.5	USD	2017
	79284.5		2016
	79458.5		2015
Producer Price Index, Manufacturing	197.5		July 2019
	198.5		July 2018
	187.3		July 2017

	183.4		July 2016
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Sources: The Conference Board & Bureau of Labor Statistics for PPI



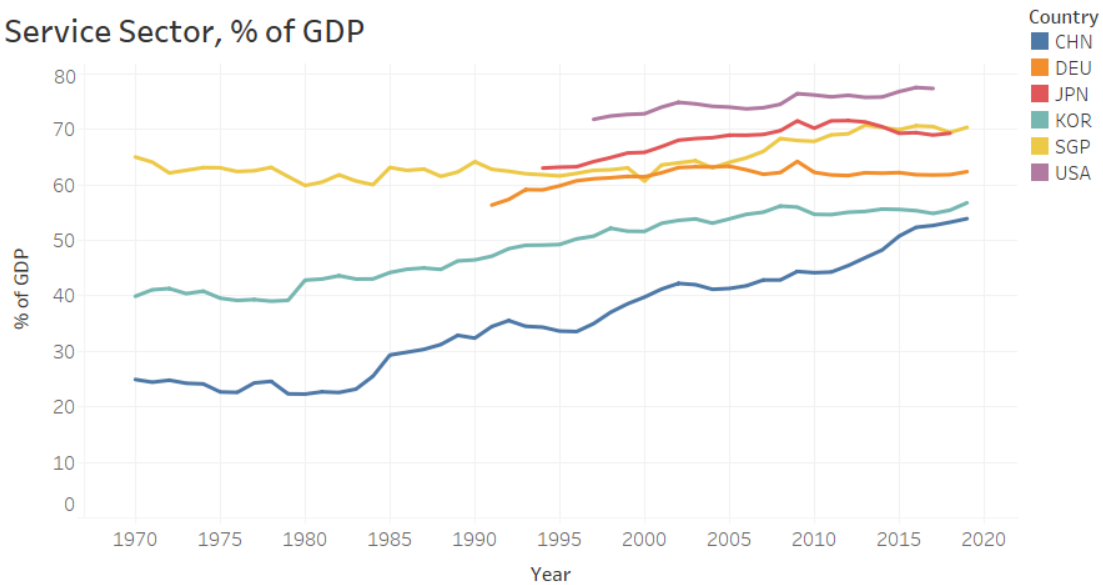


Source: World Development Indicators, World Bank

Year	United States	China	Japan	Germany	South Korea	Singapore
2015				23	29	20
2014	12		18	23	30	19
2013	12	30	18	23	31	19
2012	13	31	18	23	31	20
2011	13	31	18	23	31	20
2010	12	32	19	22	31	21
2009	12	32	17	20	29	21
2008	13	32	19	23	29	21
2007	13	32	20	23	28	25
2006	13	32	19	23	28	27
2005	13	32	19	22	28	28
2004	14	32	19	22	29	28

2003	14	32	19	22	27	26
2002	14	31	19	22	27	26
2001	14	31	19	23	28	25
2000	16	32	20	23	29	28
1999	16	31	20	22	26	24
1998	16	32	21	23	25	24
1997	17	33	21	22	24	24
1996		33	21	22	24	25
Year	United States	China	Japan	Germany	South Korea	Singapore
1995		33	22	23	25	26
1994		33	22	23	25	25
1993		34	24	24	25	26
1992		32	25	26	24	26
1991		32	26	27	25	27
1990		32	26		25	26
1989		34	26		27	27
1988		34	26		28	27
1987		34	26		28	25
1986		35	27		27	23
1985		34	27		25	21
1984		35	28		26	22
1983		36	27		24	22
1982		37	27		23	23
1981		38	27		23	27
1980		40	27		23	28
1979		40			23	26
1978		40			22	24
1977		39			22	23
1976		37			22	23
1975		38			20	22
1974		35			20	
1973		36			21	
1972		36			18	
1971		35			17	
1970		33			17	
1969		29			17	
1968		26			16	
1967		28			15	
1966		32			15	

Service Sector, % of GDP

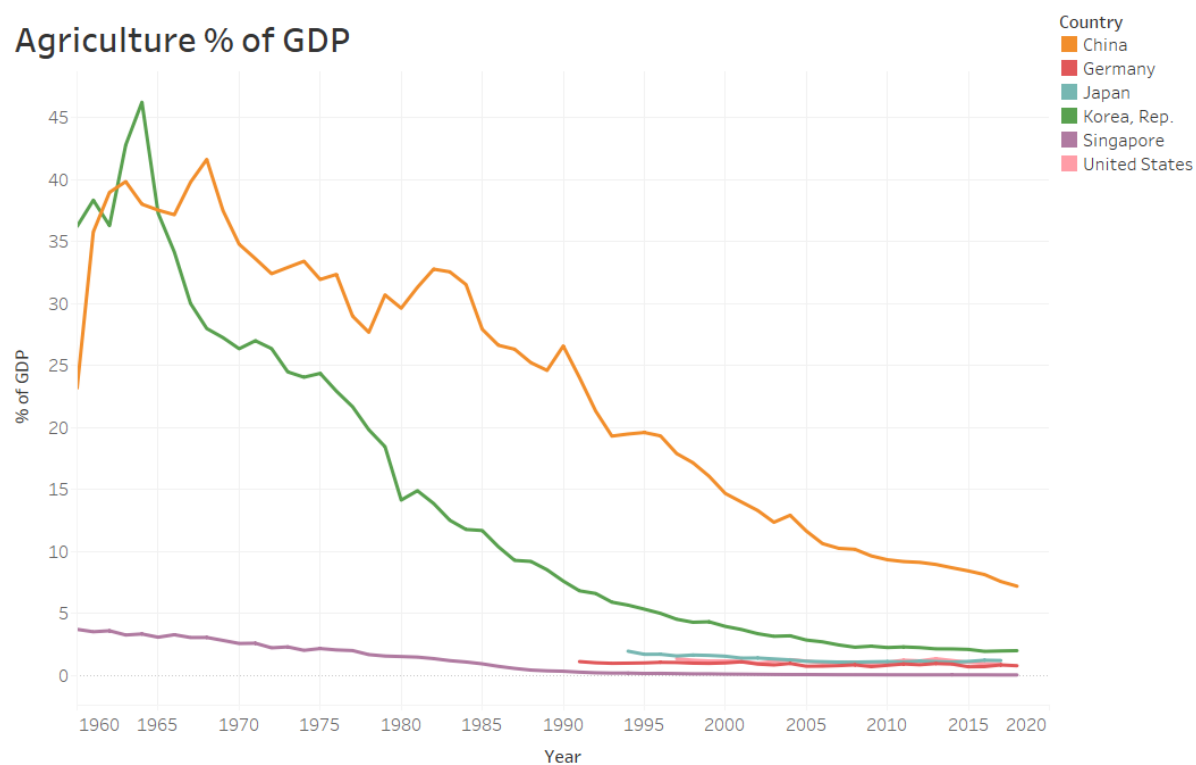


Source: World Development Indicators, World Bank

Year	United States	China	Japan	Germany	South Korea	Singapore
2015		50		69	60	74
2014	78	48	73	69	60	75
2013	78	47	74	69	59	75
2012	78	45	74	69	59	74
2011	78	44	74	69	59	74
2010	78	44	72	69	59	72
2009	79	44	74	71	61	72
2008	77	43	73	69	61	73
2007	77	43	72	69	60	71
2006	77	42	72	69	60	68
2005	77	41	72	70	59	68
2004	77	41	71	70	59	67
2003	77	42	71	70	60	68
2002	78	42	71	70	60	68
2001	77	41	70	69	59	68
2000	76	40	68	68	58	65
1999	76	39	68	68	59	67
1998	75	37	68	68	58	66

1997	75	35	67	67	57	67
1996		34	67	67	57	66
1995		34	66	66	56	66
1994		34	65	65	56	66
Year	United States	China	Japan	Germany	South Korea	Singapore
1993		35	63	65	55	66
1992		36	62	63	55	66
1991		34	60	62	53	66
1990		32	60		54	67
1989		33	60		53	66
1988		31	60		52	64
1987		30	60		52	65
1986		30	60		52	65
1985		29	59		51	66
1984		26	59		51	62
1983		23	59		51	63
1982		23	59		51	64
1981		23	58		50	63
1980		22	58		51	62
1979		22	58		47	64
1978		25	57		47	66
1977		24	57		47	65
1976		23	56		47	65
1975		23	56		47	65
1974		24	54		48	
1973		24	52		48	
1972		25	53		48	
1971		24	52		49	
1970		25	51		48	
1969		27			45	
1968		27			45	
1967		26			45	
1966		25			41	
1965		27			39	
1964		27				
1963		27				
1962		30				
1961		32				

Agriculture % of GDP



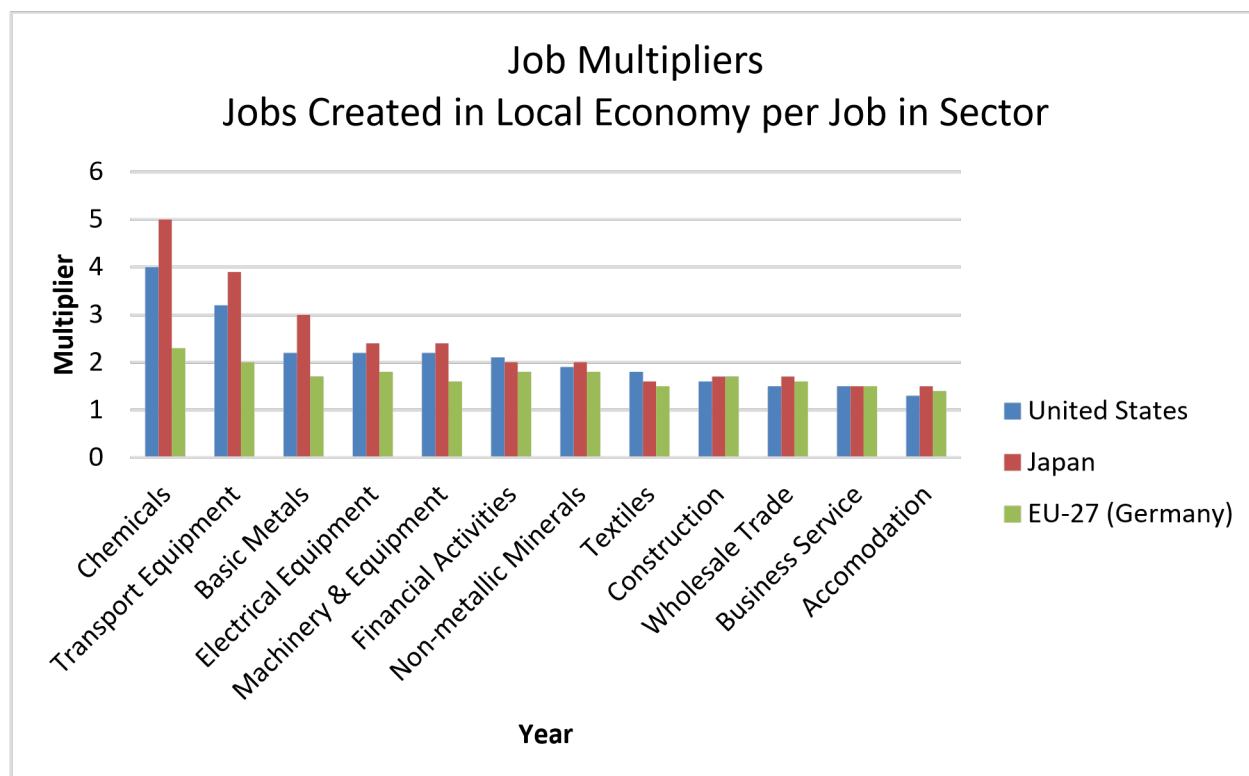
Source: World Development Indicators, World Bank

Year	United States	China	Japan	Germany	Korea, Rep.	Singapore
1970					17.17	17.45
1971					16.48	18.60
1972					18.53	20.17
1973					21.27	21.30
1974					20.63	22.00
1975					19.90	21.44
1976					21.19	22.08
1977					20.80	22.60
1978					20.86	23.34
1979					21.38	25.25
1980					21.58	26.53

1981					21.41	25.76
1982					21.35	22.29
1983					22.54	21.46
1984					24.14	21.40
1985					23.85	20.12
1986					24.99	22.61
1987					26.33	24.09
1988					27.18	26.08
1989					26.14	25.30
1990					24.60	24.40
1991				24.85	24.70	25.46
1992				23.38	23.91	24.35
1993				21.32	24.10	24.47
1994			23.49	20.80	24.77	23.62
1995			23.47	20.54	25.22	23.99
1996			23.44	20.06	24.17	23.17
1997	16.09		23.42	20.23	24.11	22.15
1998	15.77		22.90	20.41	25.01	22.69
1999	15.45		22.47	19.99	25.21	22.85
2000	15.12		22.56	20.55	26.01	25.86
2001	13.92		21.25	20.34	24.67	23.39
2002	13.45		20.88	19.79	24.22	24.74
2003	13.32		21.11	19.84	23.87	24.77
2004	13.18	31.98	21.33	20.03	25.72	27.12
2005	12.99	32.09	21.64	20.07	25.52	27.08
2006	12.99	32.45	21.61	20.66	25.08	26.58
2007	12.78	32.38	22.08	20.85	25.46	23.82
2008	12.26	32.12	21.43	20.05	25.80	20.59
2009	11.73	31.60	19.15	17.68	26.05	20.27
2010	11.93	31.61	20.83	19.70	27.80	20.77

2011	11.95	32.06	19.67	20.23	28.48	19.58
2012	11.85	31.53	19.73	20.16	28.17	19.12
2013	11.81	30.67	19.44	19.93	28.24	17.64
2014	11.64	30.50	19.73	20.22	27.49	18.00
2015	11.62	29.51	20.81	20.38	27.09	18.09
2016	11.12	28.96	20.68	20.74	26.78	17.61
2017	11.15	29.30	20.73	20.56	27.57	18.87
2018		29.41		20.40	27.23	20.82

Source: World Development Indicators, World Bank



Source: Study on 'Monitoring of Sectoral Employment' by Robert Stehrer and Terry Ward, 2012, The Vienna Institute for International Economic Studies.

Industry	United States	Japan	EU-27 (Germany)
Chemicals	4	5	2.3
Transport Equipment	3.2	3.9	2
Basic Metals	2.2	3	1.7

Electrical Equipment	2.2	2.4	1.8
Machinery & Equipment	2.2	2.4	1.6
Financial Activities	2.1	2	1.8
Non-metallic Minerals	1.9	2	1.8
Textiles	1.8	1.6	1.5
Construction	1.6	1.7	1.7
Wholesale Trade	1.5	1.7	1.6
Business Service	1.5	1.5	1.5
Accommodation	1.3	1.5	1.4

Net Capital Expenditures / Sales, Top 10 by Region

United States	
Industry Name	Net Cap Ex/Sales
Green & Renewable Energy	243.22 %
Drugs (Biotechnology)	32.65%
Tobacco	30.04%
Utility (Water)	24.13%
Oil/Gas Distribution	23.05%
Semiconductor Equip	22.98%
Healthcare Products	22.17%
Precious Metals	21.76%
Real Estate (General/Diversified)	21.19%
Drugs (Pharmaceutical)	20.21%

Japan	
Industry Name	Net Cap Ex/Sales
R.E.I.T.	196.05%
Insurance (General)	72.10%
Oil/Gas (Production and Exploration)	37.28%
Real Estate (Operations & Services)	32.95%
Oil/Gas Distribution	21.97%
Cable TV	20.53%
Drugs (Biotechnology)	17.91%
Retail (Online)	16.40%
Precious Metals	14.31%
Financial Svcs. (Non-bank & Insurance)	13.28%

Emerging Markets	Europe	
Industry Name	Industry Name	Net Cap Ex/Sales
R.E.I.T.	Cable TV	56.47%
Green & Renewable Energy	Green & Renewable Energy	44.76%
Information Services	Drugs (Pharmaceutical)	31.16%
Education	Real Estate (Operations & Services)	30.35%
Oil/Gas Distribution	Healthcare Products	27.62%
Semiconductor	Oil/Gas (Production and Exploration)	22.54%
Power	R.E.I.T.	21.40%
Precious Metals	Education	20.97%
Transportation (Railroads)	Software (System & Application)	18.61%
Utility (Water)	Oil/Gas Distribution	17.35%

Source: Professor Aswath Damodaran,
Damodaran Online, Stern School of Business, New York University

Global Company Rankings by Revenue

1987 Ranking	Company	Country	Billion 2015 US \$
1	General Motors	USA	102.8
2	Exxon Mobil	USA	69.9
3	Ford Motor	USA	62.7
4	Intl. Business Machines	USA	51.3
5	Toyota Motor Corp	Japan	46.2
6	Mobil	USA	44.9
7	General Electric	USA	35.2
8	AT&T	USA	34.1
9	Texaco	USA	31.6
10	DuPont	USA	27.1
11	ChevronTexaco	USA	24.4
12	Chrysler	USA	22.5
13	Altria Group	USA	20.7

14	Amoco	USA	18.3
15	Nabisco Group Holdings	USA	17.0
16	Shell Oil	USA	16.8
17	Boeing	USA	16.3
18	United Technologies	USA	15.7
19	Procter & Gamble	USA	15.4
20	Occidental Petroleum	USA	15.3
21	Atlantic Richfield	USA	14.6
22	Tenneco Automotive	USA	14.6
23	Marathon Oil	USA	14.0
24	McDonnell Douglas	USA	12.7
25	Rockwell Automation	USA	12.3
26	Honda Motor Company Ltd	Japan	12.3
27	Honeywell Intl.	USA	11.8
28	Mazda Motor Corp	Japan	11.7
29	Eastman Kodak	USA	11.6
30	Dow Chemical	USA	11.1
31	CBS	USA	10.7
32	Goodyear Tire & Rubber	USA	10.3
33	Lockheed Martin	USA	10.3
34	ConocoPhillips	USA	9.8
35	Xerox	USA	9.4
36	Sunoco	USA	9.4
37	PepsiCo	USA	9.3
38	BP America	USA	9.2
39	General Dynamics	USA	9.2
1987 Ranking	Company	Country	Billion 2015 US \$
40	Showa Shell Sekiyu kk	Japan	9.0
41	Kraft	USA	8.7
42	Coca-Cola	USA	8.7
43	3M	USA	8.6
44	Sanyo Electric Co Ltd	Japan	8.3
45	Sara Lee	USA	7.9
46	Assicurazioni Generali Spa	Italy	7.9
47	Kajima Corp	Japan	7.9
48	ITT Industries	USA	7.9
49	Union Carbide	USA	7.8
50	Anheuser-Busch	USA	7.7

2015 Ranking	Company	Country	Billion 2015 US \$
1	Walmart	USA	482
2	State Grid	China	330
3	China National Petroleum	China	299
4	Sinopec Group	China	294
5	Royal Dutch Shell	Netherlands	272
6	Exxon Mobil	USA	246
7	Volkswagen	Germany	237
8	Toyota Motor	Japan	237
9	Apple	USA	234
10	BP	UK	226
11	Berkshire Hathaway	USA	211
12	McKesson	USA	192
13	Samsung Electronics	S. Korea	177
14	Glencore	Switzerland	170
15	Industrial & Commercial Bank of China	China	167
16	Daimler	Germany	166
17	United Health Group	USA	157
18	CVS Health	USA	153
19	EXOR Group	Italy	153
20	General Motors	USA	152
21	Ford Motor	USA	150
22	China Construction Bank	China	148
23	AT&T	USA	147
24	Total	France	143
25	Hon Hai Precision Industry	Taiwan	141
26	General Electric	USA	140
27	China State Construction Engineering	China	140
2015 Ranking	Company	Country	Billion 2015 US \$
28	AmerisourceBergen	USA	136
29	Agricultural Bank of China	China	133
30	Verizon	USA	132
31	Chevron	USA	131
32	E.ON	Germany	129
33	AXA	France	129
34	Allianz	Germany	123
35	Bank of China	China	122
36	Honda Motor	Japan	122

37	Japan Post Holdings	Japan	119
38	Costco	USA	116
39	BNP Paribas	France	112
40	Fannie Mae	USA	110
41	Ping An Insurance	China	110
42	Kroger	USA	110
43	Societe Generale	France	108
44	Amazon.com	USA	107
45	China Mobile Communications	China	107
46	SAIC Motor	China	107
47	Walgreens Boots Alliance	USA	103
48	HP	USA	103
49	Assicurazioni Generali	Italy	103
50	Cardinal Health	USA	103

2019 Ranking	Company	Country	Billion 2019 US \$
1	Walmart	U.S.	514.4
2	Sinpec Group	China	414.6
3	Royal Dutch Shell	Netherlands	396.6
4	China National Petroleum	China	393
5	State Grid	China	387
6	Saudi Aramco	Saudi Arabia	356
7	BP	Britain	303.7
8	Exxon Mobil	U.S.	290.2
9	Volkswagen	Germany	278.3
10	Toyota Motor	Japan	272.6
11	Apple	U.S.	265.6
12	Berkshire Hathaway	U.S.	247.8
13	Amazon.com	U.S.	232.9

14	UnitedHealth Group	U.S.	226.2
15	Samsung Electronics	South Korea	221.6
16	Glencore	Switzerland	219.8
17	McKesson	U.S.	214.3
18	Daimler	Germany	197.5
19	CVS Health	U.S.	194.6
20	Total	France	184.1
21	China State Construction Engineering	China	181.5
22	Trafigura Group	Singapore	180.7
23	Hon Hai Precision Industry	Taiwan	175.6
24	EXOR Group	Netherlands	175
25	AT&T	U.S.	170.8
26	Industrial & Commercial Bank of China	China	169
27	Amerisource Bergen	U.S.	168
28	Chevron	U.S.	166.3
29	Ping An Insurance	China	163.6
30	Ford Motor	U.S.	160.3
31	China Construction Bank	China	151.1
32	General Motors	U.S.	147
33	Misubishi	Japan	145.2
34	Honda	Japan	143.3

35	Costco Wholesale	U.S.	141.6
36	Agricultural Bank of China	China	139.5
37	Alphabet	U.S.	136.8
38	Cardinal Health	U.S.	136.8
39	SAIC Motor	China	136.4
40	Walgreens Boots Alliance	U.S.	131.5
41	JPMorgan Chase & Co.	U.S.	131.4
42	Gazprom	Russia	131.3
43	Verizon Communications	U.S.	130.9
44	Bank of China	China	127.7
45	Allianz	Germany	127
46	AXA	France	125.6
47	Kroger	U.S.	121.2
48	General Electric	U.S.	120.3
49	Fannie Mae	U.S.	120.1
50	Lukoil	Russia	119.1

Sources:

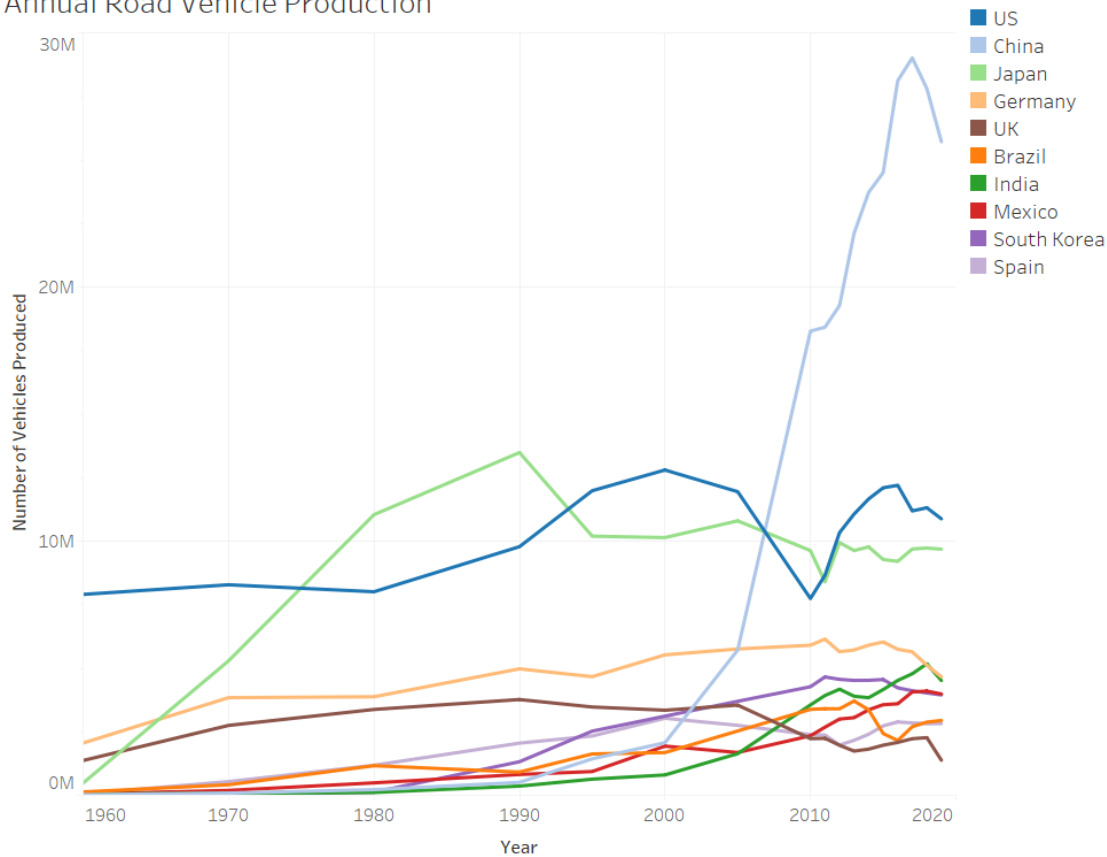
2019 Global 500 taken from Fortune.com.

2015 Global 500 taken from Fortune.com.

1987 Global 500 combines USA 500 from Fortune.com and International 500 from Compustat.

1987 foreign currencies are converted with exchange rates from the Pacific Exchange Rate Service, Sauder School of Business

Annual Road Vehicle Production



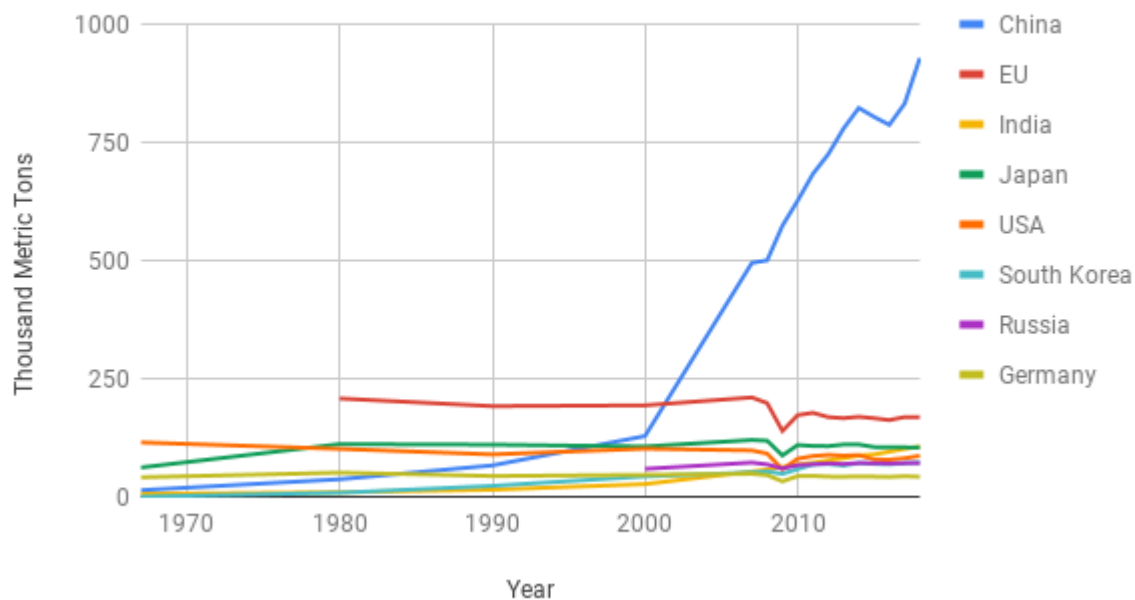
Source: International Organization of Motor Vehicle Manufacturers

Year	China	US	Japan	India	Germany	Mexico	South Korea	Brazil	Spain	UK
1950		8,005,859	31,597	14,688	306,064	0	0	0	253	357,512
1960	22,574	7,905,119	481,551	51,136	2,056,149	49,807	0	133,041	58,209	1,369,210
1970	87,166	8,283,949	5,289,157	76,409	3,842,247	192,841	28,819	416,089	539,132	2,750,086
1980	222,288	8,009,841	11,042,884	113,917	3,878,553	490,006	123,135	1,165,174	1,181,659	3,378,433
1990	509,242	9,782,997	13,486,796	362,655	4,976,552	820,558	1,321,630	914,466	2,053,350	3,768,993
1995	1,434,772	11,985,457	10,195,536	636,000	4,667,364	935,017	2,526,400	1,629,008	2,333,787	3,474,705
2000	2,069,069	12,799,857	10,140,796	801,360	5,526,615	1,935,527	3,114,998	1,681,517	3,032,874	3,348,361
2005	5,717,619	11,946,653	10,799,659	1,638,674	5,757,710	1,684,238	3,699,350	2,530,840	2,752,500	3,549,008
2010	18,264,761	7,743,093	9,628,920	3,557,073	5,905,985	2,342,282	4,271,741	3,381,728	2,387,900	2,229,421
2011	18,418,876	8,661,535	8,398,630	3,927,411	6,146,948	2,681,050	4,657,094	3,407,861	2,373,329	2,242,928

2012	19,271,808	10,335,765	9,943,077	4,174,713	5,649,260	3,001,814	4,561,766	3,402,508	1,979,179	1,967,765
2013	22,116,825	11,066,432	9,630,181	3,898,425	5,718,222	3,054,849	4,521,429	3,712,380	2,163,338	1,740,000
2014	23,722,890	11,660,699	9,774,558	3,840,160	5,907,548	3,365,306	4,524,932	3,364,890	2,402,978	1,817,000
2015	24,503,326	12,100,095	9,278,321	4,160,585	6,033,164	3,565,469	4,555,957	2,429,463	2,733,201	1,972,000
2016	28,118,794	12,198,137	9,204,590	4,519,341	5,746,808	3,600,365	4,228,509	2,156,356	2,885,922	2,082,000
2017	29,015,434	11,189,985	9,693,746	4,782,896	5,645,581	4,068,415	4,114,913	2,699,672	2,848,335	2,227,000
2018	27,809,196	11,314,705	9,728,528	5,174,645	5,120,409	4,100,525	4,028,834	2,879,809	2,819,565	2,270,000
2019	25,720,665	10,880,019	9,684,298	4,516,017	4,661,328	3,986,794	3,950,617	2,944,988	2,822,355	1,381,405

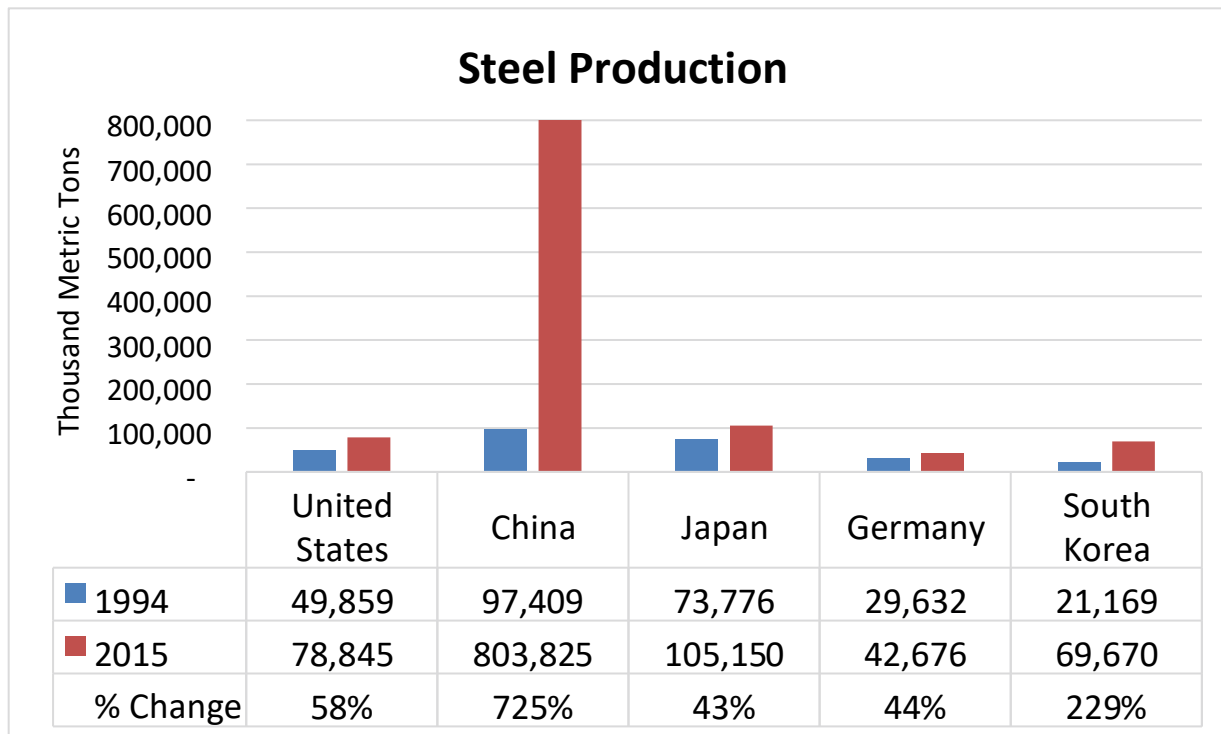
Source: International Organization of Motor Vehicle Manufacturers

Steel Production



	China	EU	India	Japan	USA	SK	RUS	GER
1990	66.4	191.8	15	110.3	89.7	23.1	-	44
2018	928.3	168.2	106.5	104.3	86.7	72.5	71.7	42.4
% Change	1,298.04	-12.30	610.00	-5.44	-3.34	213.85		-3.64

Source: World Steel Association



Source: World Steel Association

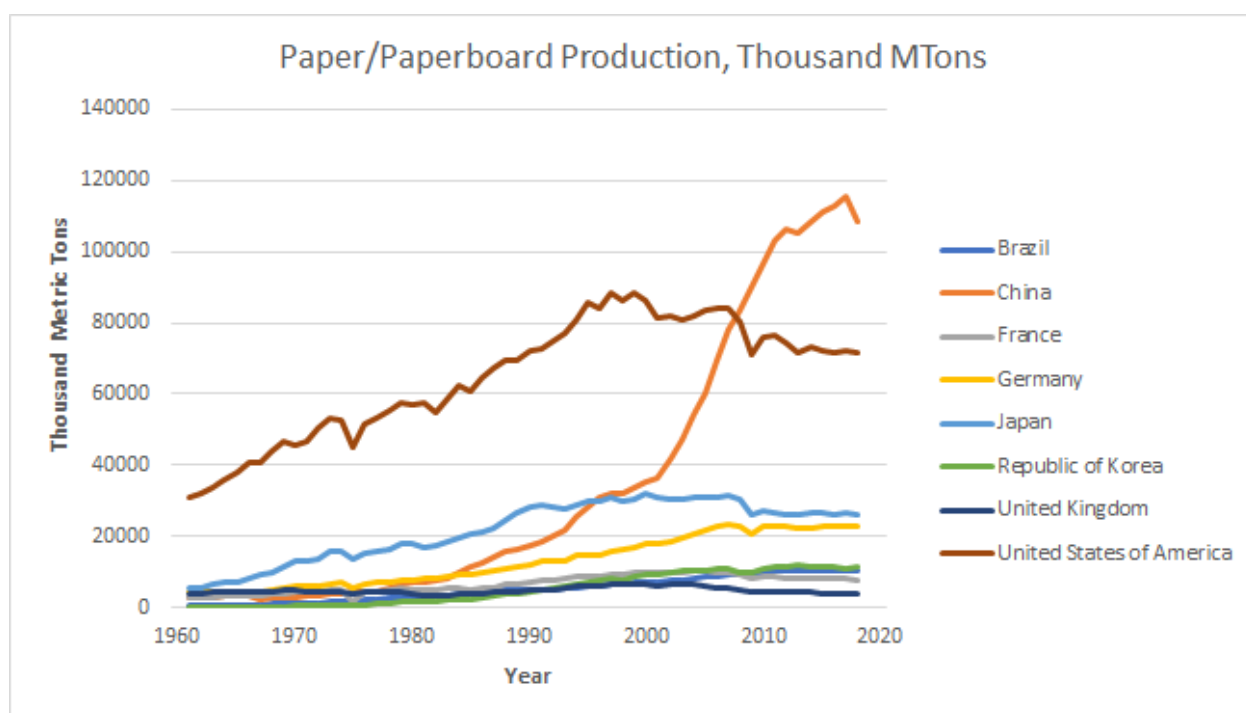
Aluminum Production, Metric Tons

Year	China	France	Germany	India	Italy	Japan	Russia	UK	USA
1990	850	326	740	433	232	34		294	4050
1991	963	286	690	504	206	32		294	4120
1992	1100	418	603	496	161	19	2700	244	4040
1993	1220	426	552	466	156	18	2820	239	3700
1994	1450	438	505	472	176	17	2670	231	3300
1995	1680	372	575	537	198	18	2720	238	3380

1996	1770	380	576	531	184	17	2870	240	3580
1997	1960	399	572	484	188	17	2910	248	3600
1998	2340	424	612	542	187	16	3010	258	3710
1999	2530	455	634	614	187	10.9	3150	272	3780
2000	2800	441	644	644	189	6.54	3250	305	3670
2001	3250	462	652	624	187	6.63	3300	341	2640
2002	4300	463	653	671	190	6.41	3350	344	2710
2003	5450	443	661	799	191	6.46	3480	343	2700
2004	6670	451	668	861	195	6.43	3590	360	2520
2005	7800	442	648	942	193	6.5	3650	369	2480
2006	9360	442	516	1110	194	6.6	3720	360	2280
2007	12600	428	551	1030	183	57	3960	365	2550
2008	13200	389	606	1400	180	59	4190	326	2660
2009	12900	345	292	1600	171	39	3820	253	1730
2010	16200	356	402	1610	168	54	3950	186	1730
2011	18100	334	432	1670	168	48	3910	213	1990
2012	23500	349	410	1704	110	26	4024	60	2070
2013	26500	346	492	1703		29	3601	44	1946

2014	28300	360	531	1939	46	3300	42	1710
2015	31400	420	541	2355	42	3530	47	1587
2016	31873	425	575	2723	45	3561	48	841
2017	32600	430	580	3200	46.1	3600		740
2018	35800	435	550	3680	47.2	3630		891
2019	36000			3700		3600		1100

Source: United States Geological Series



Source: Food and Agricultural Organization of the United Nations, Statistics Division

Year	Brazil	China	France	Germany	Japan	Republic of Korea	United Kingdom	United States of America
1961	533,100	2,531,100	2,744,000	4,358,700	5,392,700	66,800	4,021,300	30,757,696
1962	601,700	2,742,900	2,822,000	4,476,000	5,672,200	89,600	3,952,300	32,292,700
1963	656,300	3,000,000	3,002,000	4,611,800	6,380,000	98,000	4,137,200	33,687,004
1964	718,300	3,087,000	3,128,000	4,320,900	7,366,000	108,100	4,401,300	35,778,200
1965	750,700	3,191,400	3,166,000	4,533,900	7,298,600	120,400	4,536,400	37,866,504
1966	813,200	3,338,600	3,451,200	4,636,500	8,194,600	139,000	4,539,900	40,705,196
1967	822,600	2,478,400	3,528,500	4,510,300	9,044,000	154,700	4,436,200	40,504,596
1968	886,900	2,634,600	3,612,100	5,025,000	9,958,000	198,000	4,660,100	44,117,196
1969	952,200	2,788,000	3,997,200	5,474,400	11,310,000	240,900	4,936,500	46,814,008
1970	1,098,600	2,908,227	4,134,200	5,891,800	12,973,000	330,000	4,903,200	45,805,008
1971	1,237,300	3,059,602	4,225,800	5,977,500	12,907,000	433,000	4,335,900	46,954,008
1972	1,345,700	3,371,000	4,529,500	6,226,300	13,648,000	486,000	4,337,800	50,757,000
1973	1,587,900	4,116,000	4,785,000	6,733,500	15,975,000	512,000	4,614,000	52,971,000
1974	1,853,700	3,926,000	5,060,000	6,873,400	15,645,000	618,000	4,552,000	52,540,008
1975	1,687,800	4,128,000	1,549,000	5,563,600	13,600,000	662,000	3,615,000	45,248,008
1976	2,044,900	4,213,000	4,552,000	6,703,000	15,394,000	698,000	4,188,000	51,757,008
1977	2,235,500	4,661,000	4,642,000	6,874,000	15,702,000	1,124,000	4,145,000	53,347,000
1978	2,534,100	5,370,000	4,963,000	7,129,000	16,499,000	1,365,000	4,165,000	55,154,000
1979	2,979,000	6,321,000	5,260,000	7,727,000	17,861,000	1,594,000	4,223,000	57,410,008
1980	3,361,000	6,842,296	5,152,000	7,868,000	18,089,000	1,680,000	3,787,000	56,839,000
1981	3,102,000	6,948,000	5,148,000	8,119,000	16,980,000	1,783,000	3,379,000	57,667,008
1982	3,329,000	7,463,000	5,067,000	8,075,000	17,453,000	1,737,000	3,227,000	54,899,000
1983	3,426,000	8,446,000	5,263,000	8,560,000	18,441,000	1,982,000	3,208,000	58,804,000
1984	3,768,000	9,550,000	5,566,000	9,443,000	19,345,000	2,207,000	3,591,000	62,366,000
1985	4,022,000	11,237,000	5,150,000	9,478,000	20,469,000	2,312,000	3,712,000	60,959,008
1986	4,525,000	12,641,000	5,583,000	9,713,000	21,062,000	2,773,000	3,941,000	64,444,008
1987	4,712,000	14,271,000	5,581,000	10,255,000	22,537,000	3,163,000	4,184,000	67,532,008
1988	4,685,000	15,740,000	6,313,000	10,902,000	24,625,000	3,659,000	4,295,000	69,587,000
1989	4,806,000	16,527,000	6,754,000	11,579,000	26,809,000	4,029,000	4,450,000	69,514,016

1990	4,844,000	17,405,814	7,049,000	12,194,000	28,088,000	4,524,000	4,824,000	71,965,000
1991	4,888,000	18,285,163	7,442,000	12,904,000	29,053,000	4,922,000	4,951,000	72,724,008
1992	4,913,000	20,292,809	7,691,000	13,214,000	28,324,000	5,504,000	5,152,000	75,160,016
1993	5,352,000	21,969,352	7,975,000	13,034,000	27,764,000	5,804,000	5,282,000	77,250,008
1994	5,730,000	25,738,939	8,701,000	14,457,000	28,527,000	6,435,000	5,829,000	80,945,000
1995	5,856,000	28,517,267	8,619,000	14,827,000	29,664,000	6,878,000	6,093,000	85,526,000
1996	5,885,000	30,997,429	8,556,000	14,733,000	30,014,000	7,681,000	6,189,000	84,046,000
1997	6,475,000	31,916,972	9,143,000	15,930,000	31,014,000	8,334,000	6,480,000	88,511,000
1998	6,524,000	32,203,111	9,161,300	16,311,000	29,888,000	7,750,000	6,477,000	86,469,000
1999	6,889,000	33,627,217	9,603,000	16,742,000	30,631,000	8,875,000	6,576,000	88,670,000
2000	7,116,000	35,184,156	10,006,000	18,182,000	31,828,000	9,308,000	6,605,000	86,252,263
2001	7,354,000	36,530,647	9,625,000	17,879,000	30,717,000	9,332,000	6,204,000	81,248,828
2002	7,661,000	42,061,000	9,809,000	18,526,000	30,686,000	9,812,000	6,452,000	81,879,072
2003	7,811,000	47,419,000	9,939,000	19,310,000	30,457,000	10,148,000	6,455,000	80,712,166
2004	8,221,000	54,072,000	10,255,000	20,391,000	30,891,000	10,511,000	6,442,000	82,084,368
2005	8,597,000	60,405,000	10,332,000	21,679,000	30,953,000	10,549,000	6,241,000	83,697,335
2006	8,725,000	69,394,000	10,006,200	22,656,000	31,097,000	10,703,000	5,454,000	84,316,937
2007	9,009,000	77,965,000	9,870,500	23,317,000	31,268,000	10,932,000	5,228,000	83,915,965
2008	9,409,000	83,685,000	9,404,000	22,828,000	30,628,000	9,890,000	4,983,270	80,178,382
2009	9,428,000	90,192,000	8,331,500	20,870,000	26,268,000	9,726,000	4,293,001	71,355,455
2010	9,978,000	96,545,000	8,829,800	23,072,000	27,364,000	11,022,000	4,300,001	75,772,845
2011	10,159,000	103,226,000	8,527,213	22,706,000	26,609,000	11,256,000	4,341,998	76,430,822
2012	10,260,000	106,569,000	8,354,181	22,603,000	25,957,000	11,332,000	4,291,998	74,492,000
2013	10,444,000	105,150,000	8,043,150	22,401,000	26,238,000	11,767,000	4,561,001	71,732,298
2014	10,398,000	108,750,000	8,096,000	22,540,000	26,626,000	11,622,000	4,397,000	73,093,000
2015	10,477,000	111,150,000	7,983,677	22,601,000	26,404,000	11,569,000	3,970,001	72,397,000
2016	10,335,000	112,600,000	7,983,500	22,629,000	26,220,000	11,652,000	3,677,001	71,902,239
2017	10,471,000	115,350,000	8,021,410	22,925,000	26,544,000	11,091,000	3,856,990	72,044,539
2018	10,433,000	108,400,000	7,863,510	22,666,000	26,056,000	11,529,000	3,894,989	71,553,539